# RECLAMATION

Managing Water in the West

Calendar Year 2015

# Colorado River Accounting and Water Use Report: Arizona, California, and Nevada



U.S. Department of the Interior Bureau of Reclamation Lower Colorado Region Boulder Canyon Operations Office

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## **Mission Statements**

## **Department of the Interior**

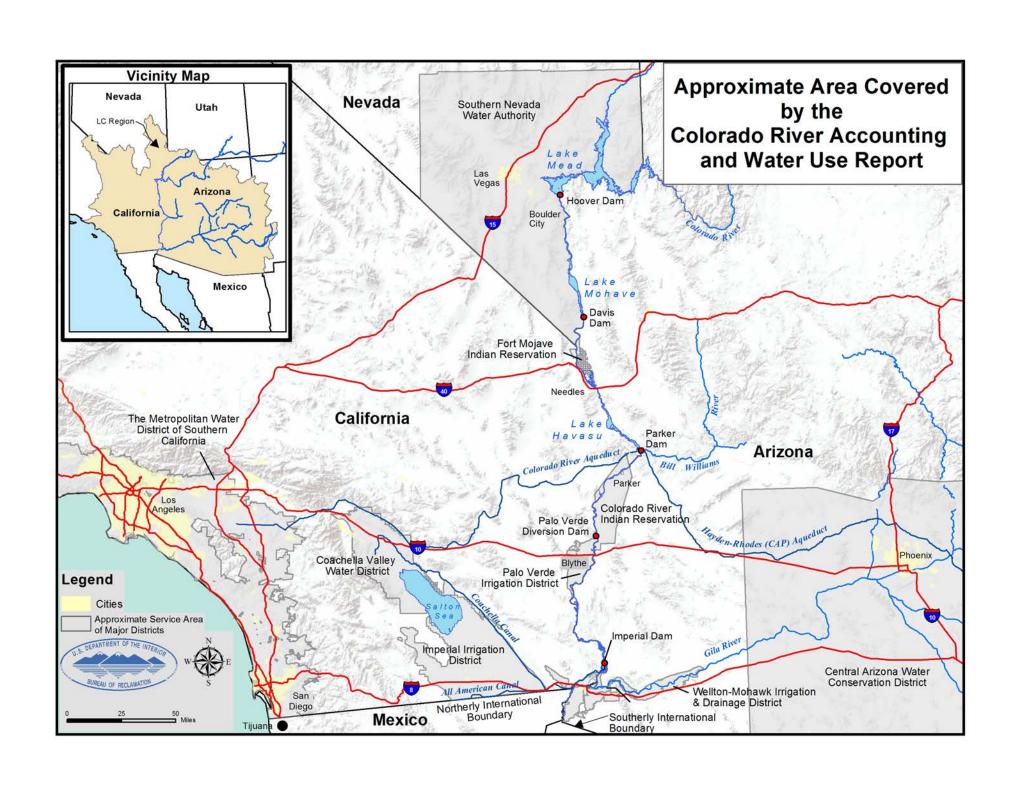
The Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

## **Bureau of Reclamation**

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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## **Acronyms and Abbreviated Terms**

These acronyms and abbreviations are found in the text, footnotes, and headings within this document.

AAC	All-American Canal	EOY	end-of-year
AACLP	All-American Canal Lining Project	FEIS	Final Environmental Impact Statement
ADP	Arizona diesel pump	FYIR	Fort Yuma Indian Reservation
ADW	Arizona diesel well	GGMC	Gila Gravity Main Canal
AEP	Arizona electric pump	ICUA	Intentionally Created Unused Apportionment
AEW	Arizona electric well	I.D.D.	Irrigation and Drainage District
AF	acre-feet	IBWC	International Boundary and Water Commission
AFY	acre-feet per year	ICS	Intentionally Created Surplus
ALTSC	Accumulated Long Term Storage Credit	IID	Imperial Irrigation District
AOP	Annual Operating Plan	IOPP	Inadvertent Overrun and Payback Policy
APS	Arizona Public Service	ISG	Colorado River Interim Surplus Guidelines
ASLD	Arizona State Land Department	IUS	Interstate Underground Storage credits
Assn.	Association	KAF	Thousand acre-feet
AWBA	Arizona Water Banking Authority	LCWSP	Lower Colorado Water Supply Project
BLM	Bureau of Land Management	LHFO	Lake Havasu Field Office (BLM)
BOY	beginning-of-year	LLC	Limited Liability Company
CAP	Central Arizona Project	LTD	Limited
CAWCD	· ·	LTSC	Long Term Storage Credit
CCLP	Coachella Canal Lining Project	MAF	Million acre-feet
CDP	California diesel pump	MWD	The Metropolitan Water District of Southern
CDW	California diesel well		California
CDEW	California diesel electric well	MOD	Main Outlet Drain
CEP	California electric pump	MODE	Main Outlet Drain Extension
CEW	California electric well	M&I	Municipal and Industrial
CFR	Code of Federal Regulations	NWR	National Wildlife Refuge
CFS	Cubic Feet per Second	NIB	Northerly International Boundary
CO	Colorado	PPR	Present Perfected Right
CR	Colorado River	PVID	Palo Verde Irrigation District
CRBC	Colorado River Board of California	QSA	Quantification Settlement Agreement
CRCN	Colorado River Commission of Nevada	SIB	Southerly International Boundary
CRIT	Colorado River Indian Tribes	SIRA	Storage and Interstate Release Agreement
CRWDA	Colorado River Water Delivery Agreement	SDCWA	San Diego County Water Authority
CU	consumptive use	SLRSP	San Luis Rey Settlement Parties
CVWD	Coachella Valley Water District	SNWA	Southern Nevada Water Authority
CY	calendar year	TCM	Thousand Cubic Meters
Diff.	difference	USGS	United States Geological Survey
Dist.	district	YAO	Yuma Area Office (Reclamation)
Div.	diversion	YDP	Yuma Desalting Plant
DPOC	drainage pump outlet channel	YFO	Yuma Field Office (BLM)
<b>ECICS</b>	Extraordinary Conservation Intentionally Created	YID	Yuma Irrigation District
	Surplus	YMIDD	Yuma Mesa Irrigation and Drainage District
ET	evapotranspiration	YPRD	Yuma Project Reservation Division

## **Glossary**

**Active Storage**: That part of the total reservoir capacity which can be withdrawn by gravity less Exclusive Flood Control Space.

**Accumulated Long Term Storage Credits (ALTSC)**: The cumulative amount of Long Term Storage Credits in a storer's long-term storage account.

**Bypass Drain**: The 53-mile-long, concrete-lined drain, which extends from the end of the Main Outlet Drain Extension near Morelos Dam to the upper end of the Ciénega de Santa Clara (Ciénega) in Mexico. The Bypass Drain, constructed to assist the United States in meeting its obligations under Minute No. 242 of the International Boundary and Water Commission, conveys pumped drainage from the Wellton-Mohawk Irrigation and Drainage District to the Ciénega.

**Colorado River Aquifer**: The aquifer underlying the Colorado River mainstream consisting of permeable, partly saturated sediments and sedimentary rocks that are hydraulically connected to the Colorado River so that water can move between the Colorado River and the aquifer in response to withdrawal of water from the aquifer or differences in water-level elevations between the Colorado River and the aquifer.

**Colorado River Basin**: All of the drainage area of the Colorado River System and all other territory within the United States of America to which the waters of the Colorado River System shall be beneficially applied.

Colorado River System: That portion of the Colorado River and its tributaries within the United States.

Colorado River water: Water in or withdrawn from the mainstream.

**Consuming State**: Is the Lower Division State where ICUA will be used.

**Consumptive use**: Diversions from the mainstream of the Colorado River less such Return Flow thereto as is available for consumptive use in the United States or in satisfaction of the Mexican Treaty Obligation. Consumptive use from the mainstream within a Lower Division state includes water drawn from the mainstream by underground pumping.

**Consolidated Decree**: The Consolidated Decree of the Supreme Court of the United States in *Arizona* v. *California et al.*, entered March 27, 2006 (547 U.S. 150 (2006)), or as it may be further modified.

**Domestic Use**: The use of water for household, stock, municipal, mining, industrial, and other like purposes, but excluding the use of water for the generation of electric power.

**Drain Pump Outlet Channel (DPOC)**: The DPOC drainage system consists of 24 wells which provide groundwater drainage for the agricultural lands of the South Gila Valley. When this drainage water is returned to the Colorado River by DPOC Nos. 1, 2, 3, and 4, it is part of the water delivered to Mexico above Morelos Dam in accordance with the 1944 Mexican Water Treaty.

**Entitlement**: An authorization to beneficially use Colorado River water pursuant to: (1) a right decreed by the Supreme Court, (2) a water delivery contract with the United States through the Secretary of the Interior, or (3) a Secretarial Reservation.

**Exclusive Flood Control Space**: The space in a reservoir reserved for the sole purpose of regulating and attenuating flood inflows to abate flood damage.

**Intentionally Created Unused Apportionment (ICUA)**: Unused apportionment developed consistent with the laws of the Storing State and exists solely as a result of, and would not exist except for, implementing a Storage and Interstate Release Agreement (SIRA).

**Inadvertent Overrun**: Colorado River water diverted, pumped or received by an entitlement holder within the Lower Division States that is in excess of the water user's entitlement for that year.

**Lee Ferry**: The point in the mainstream of the Colorado River one mile below the mouth of the Paria River that divides the upper and lower basins.

**Live Storage**: That part of the total reservoir capacity from which water can be withdrawn by gravity. This capacity is equal to the total capacity less the dead pool capacity.

**Lower Basin States**: Those parts of the States of Arizona, California, Nevada, New Mexico, and Utah within and from which waters naturally drain into the Colorado River System below Lee Ferry, and also all parts of said States located without the drainage area of the Colorado River System which are beneficially served by water diverted from the Colorado River system below Lee Ferry.

Lower Division States: The States of Arizona, California, and Nevada.

**Long Term Storage Credits** (LTSC): Colorado River water that has been stored offstream pursuant to a Storage and Interstate Release Agreement and credited to a storer's long-term storage account for use in future years.

**Main Outlet Drain (MOD)**: A channel that conveys pumped groundwater drainage from the Wellton-Mohawk Valley to the Gila River near the confluence with the Colorado River.

**Main Outlet Drain Extension (MODE)**: A 12-mile-long channel connected to the Main Outlet Drain that conveys Wellton-Mohawk drainage to points above or below Morelos Dam.

**Mainstream**: Mainstream means the main channel of the Colorado River downstream from Lee Ferry within the United States, including the reservoirs behind dams on the main channel, and Senator Wash Reservoir off the main channel.

**Mexican Treaty Obligation**: The United States obligation under the 1944 Mexican Water Treaty "Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande", signed February 3, 1944, including supplements to and obligations associated with Minutes of the International Boundary and Water Commission adopted pursuant to the 1944 Mexican Water Treaty.

**Off-Stream Storage**: Storage in a surface reservoir off of the mainstream or in a ground water aquifer. Off-stream storage includes indirect recharge when Colorado River water is exchanged for groundwater that otherwise would have been pumped and consumed.

**Protective and Regulatory Pumping Unit** – **242 Well Field**: A well field and delivery system located within a 5-mile-wide strip of land north of the United States/Mexico boundary in southwestern Arizona. The unit currently consists of 21 wells which intercept part of the ground-water underflow moving southward into Mexico from the Yuma Mesa in the United States. The ground water recovered by the unit is collected in a conveyance system (the 242 Lateral) and is delivered to Mexico by the United States at the SIB as a portion of the Treaty obligation.

**Regulatory Structures**: Hoover Dam, Davis Dam, Parker Dam, Headgate Rock Dam, Palo Verde Dam, Imperial Dam, Laguna Dam and all other dams and works on the mainstream controlled or operated by the United States regulating the flow of water in the mainstream or the diversion of water from the mainstream.

**Return Flow**: Mainstream water that has been diverted and which flows or percolates back to the Colorado River or the Colorado River Aquifer and is available for use in the United States or in satisfaction of the Mexican Treaty Obligation.

**Storage and Interstate Release Agreement**: An agreement consistent with Title 43, CFR, Part 414 between the Secretary and authorized entities in two or more Lower Division States that addresses the details of: (1) Offstream storage of Colorado River water by a storing entity for future use within the Storing State; (2) Subsequent development of ICUA by the storing entity, consistent with the laws of the Storing State; (3) A request by the storing entity to the Secretary to release ICUA to the consuming entity; (4) Release of ICUA by the Secretary to the consuming entity; and (5) The inclusion of other entities that are determined by the Secretary and the storing entity and the consuming entity to be appropriate to the performance and enforcement of the agreement.

**Storing State**: A Lower Division State in which water is stored off the mainstream in accordance with a Storage and Interstate Release Agreement for future use in that State.

**Unused apportionment**: Colorado River water within a Lower Division State's basic or surplus apportionment, or both, which is not otherwise put to beneficial consumptive use during that year within that State.

**Yuma Mesa Conduit**: A 14.6 mile long pipeline which collects water from a Yuma-area well field consisting of multiple wells that are part of the overall groundwater recovery and river regulation program for the Yuma area. The groundwater recovered from the Yuma-area well field is collected into the conduit and discharged either to the Yuma Desalting Plant, the MODE, the Southerly International Boundary with Mexico via the Yuma Main Drain, or the Colorado River via the Yuma Mesa Conduit Outlet, a discharge point approximately 6 miles upstream of Morelos Dam.

### **DISCLAIMER:**

Terms contained within this Glossary are defined to provide general information and are not intended to change, modify, or interpret the laws, rules, decrees, and treaties from which they are originally derived.

Table 1. Summary of Colorado River Water Accounting and Use Data, Calendar Year 2015. (All values are in acre-feet except as noted.)

Lower Division States Consumptive Use				TOTAL
Arizona				2,604,732
California				4,620,756
Nevada			_	222,729
Total Lower Division States Consumptive Use				7,448,217
Mexico				
Total Deliveries to Mexico in Satisfaction of Treaty Requirements				1,500,000
Delivery of Water Deferred Pursuant to Section III.1 of IBWC Minute No. 319				0
To Mexico in Excess of Treaty Requirements			_	14,829
Accountable Deliveries to Mexico				1,514,829
Total Consumptive Use - Lower Division States and Mexico <sup>1</sup>				8,963,046
Water Bypassed Pursuant to IBWC Minute No. 242				151,991
Reservoir Contents - At Year's End (Thousands of Acre-Feet)				
Storage in Lake Powell				11,827
Storage in the Lower Basin <sup>2</sup>				12,232
Storage - Lower Basin plus Lake Powell <sup>3</sup>				24,059
Percentage of Active Storage - Lake Powell				48.6%
Percentage of Active Storage - Lower Basin				43.2%
Percentage of Active Storage - Lower Basin Plus Lake Powell			_	45.7%
Total System Storage <sup>4</sup>				29,630
Percentage of Total System Storage <sup>5</sup>				49.9%
Interstate Water Banking	BOY Balance	Storage <sup>6</sup>	Recovered	EOY Balance
Water Stored in Arizona by the AWBA for the Benefit of SNWA, NV	601,041	0	0	601,041
Water Stored in California by the MWD for the Benefit of SNWA, NV	205,225	125,000	0	330,225
Total Water Stored for the Benefit of SNWA, NV	806,266	125,000	0	931,266
Lower Colorado Water Supply Project Use <sup>7</sup>		Non-Federal	Federal	Total
		6,991	228	7,219
Inadvertent Overruns and Paybacks	BOY Balance	Paybacks	Overruns	EOY Balance
Arizona (based on diversion)	255	255	0	0
Intentionally Created Surplus <sup>8</sup>	BOY Balance	Creation	Reductions	EOY Balance
Arizona	103,050	0	0	103,050
California	169,085	0	71,294	97,791
Nevada	564,733	25,147	78,857	511,023
Total - Lower Division States	836,868	25,147	150,151	711,864

Footnotes: See following page.

- <sup>1</sup> The sum of Total Lower Division States Consumptive Use and Accountable Deliveries to Mexico in Satisfaction of Treaty Requirements
- <sup>2</sup> The sum of end-of-year storage in Lower Basin reservoirs Mead, Mohave, and Havasu.
- <sup>3</sup>The sum of end-of-year storage in Upper Basin Lake Powell and Lower Basin reservoirs Mead, Mohave, and Havasu.
- <sup>4</sup> Total end-of-year system storage including Reclamation reservoirs in the Upper and Lower Basins of the Colorado River system.
- <sup>5</sup> The percentage of total end-of-year system storage. This includes the Upper Basin reservoirs Powell, Navajo, Crystal, Morrow Point, Blue Mesa, Flaming Gorge, Fontenelle, and Lower Basin reservoirs Mead, Mohave, and Havasu. Based on total active system storage capacity of 59,383,000 AF.
- <sup>6</sup> The net volume of water stored by the storing entity during the reporting year and available for delivery to the storing entity in a future year.
- <sup>7</sup> Pumpage of Lower Colorado Water Supply Project wellfield to offset certain Colorado River water uses in California.
- <sup>8</sup> ICS creation amounts are provisional until verified by Reclamation. Reductions include system assessment, IOPP payback, delivery, and evaporation.

Table 2. Monthly Storage Contents of the Colorado River System Reservoirs, Calendar Year 2015. (Values in thousand acre-feet except as noted.)

	2014 EOY Balance	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	CHANGE
End of Month Active Contents <sup>1</sup>														
Lake Powell	11,537	11,147	11,024	10,913	10,837	11,491	13,090	12,996	12,637	12,333	12,375	12,280	11,827	290
Percentage of Lake Powell Active Storage <sup>2</sup>	47.4%	45.8%	45.3%	44.9%	44.6%	47.2%	53.8%	53.4%	52.0%	50.7%	50.9%	50.5%	48.6%	1%
Lake Mead	10,667	10,729	10,769	10,419	9,931	9,729	9,607	9,858	9,871	9,854	9,927	9,865	10,087	-580
Lake Mohave	1,558	1,698	1,656	1,693	1,723	1,707	1,721	1,687	1,675	1,606	1,507	1,514	1,585	27
Lake Havasu	549	584	568	578	582	590	597	580	586	581	578	572	560	11
Reservoir Storage in the Lower Basin <sup>3</sup>	12,774	13,011	12,993	12,690	12,236	12,026	11,925	12,125	12,132	12,041	12,012	11,951	12,232	-542
Percentage of Colorado River Active Storage in the Lower Basin <sup>4</sup>	45.1%	46.0%	45.9%	44.8%	43.2%	42.5%	42.1%	42.8%	42.9%	42.5%	42.4%	42.2%	43.2%	-2%
_														
Lower Basin Storage plus Lake Powell <sup>5</sup>	24,311	24,158	24,017	23,603	23,073	23,517	25,015	25,121	24,769	24,374	24,387	24,231	24,059	-252
Percentage of Active Storage, Lower Basin plus Lake Powell <sup>6</sup>	46.2%	45.9%	45.6%	44.8%	43.8%	44.7%	47.5%	47.7%	47.1%	46.3%	46.3%	46.0%	45.7%	0%
Total System Storage <sup>7</sup>	29,629	29,388	29,202	28,821	28,364	29,061	31,225	31,358	30,865	30,314	30,182	29,923	29,630	1
Percentage of Total System Storage <sup>8</sup>	49.9%	49.5%	49.2%	48.5%	47.8%	48.9%	52.6%	52.8%	52.0%	51.0%	50.8%	50.4%	49.9%	0%

<sup>&</sup>lt;sup>1</sup> Actual values may differ from the displayed values due to rounding and being displayed to the nearest thousand acre-feet.

<sup>&</sup>lt;sup>2</sup> Percentage of total active storage capacity available in Lake Powell. Based on total active storage capacity of 24,322,000 AF.

<sup>&</sup>lt;sup>3</sup> The sum of end-of-month storage in reservoirs Mead, Mohave, and Havasu.

<sup>&</sup>lt;sup>4</sup> The percentage of available active storage capacity held in the Lower Basin (Lakes Mead, Mohave and Havasu). Based on total active storage capacity of 28,306,000 AF.

<sup>&</sup>lt;sup>5</sup> The sum of end-of-month storage in Lake Powell (Upper Basin) and Lakes Mead, Mohave and Havasu (Lower Basin).

<sup>&</sup>lt;sup>6</sup> The percentage of available total active storage capacity held in Lake Powell (Upper Basin) and Lakes Mead, Mohave, and Havasu (Lower Basin). Based on total active storage capacity of 52,628,000 AF.

<sup>&</sup>lt;sup>7</sup> Total end-of-month system storage, includes Reclamation reservoirs in the Upper and Lower Basins of the Colorado River system.

<sup>&</sup>lt;sup>8</sup> The percentage of total end-of-month system storage. This includes the Upper Basin Lakes Powell, Navajo, Crystal, Morrow Point, Blue Mesa, Flaming Gorge, Fontenelle, and Lower Basin Lakes Mead, Mohave, and Havasu. Based on total active system storage capacity of 59,383,000 AF.

## COMPILATION OF RECORDS IN ACCORDANCE WITH ARTICLE V OF THE CONSOLIDATED DECREE OF THE UNITED STATES SUPREME COURT IN ARIZONA v. CALIFORNIA, 547 U.S. 150 (2006)

In accordance with Article V of the Consolidated Decree of the United States Supreme Court in Arizona *v*. California, 547 U.S. 150 (2006) (Consolidated Decree):

"The United States shall prepare and maintain, or provide for the preparation and maintenance of, and shall make available, annually and at such shorter intervals as the Secretary of the Interior shall deem necessary or advisable, for inspection by interested persons at all reasonable times and at a reasonable place or places, complete, detailed and accurate records of:

- (A) Releases of water through regulatory structures controlled by the United States;
- (B) Diversions of water from the mainstream, return flow of such water to the stream as is available for consumptive use in the United States or in satisfaction of the Mexican Treaty obligation, and consumptive use of such water. These quantities shall be stated separately as to each diverter from the mainstream, each point of diversion, and each of the States of Arizona, California and Nevada;

- (C) Releases of mainstream water pursuant to orders therefor but not diverted by the party ordering the same, and the quantity of such water delivered to Mexico in satisfaction of the Mexican Treaty or diverted by others in satisfaction of rights decreed herein. These quantities shall be stated separately as to each diverter from the mainstream, each point of diversion, and each of the States of Arizona, California and Nevada;
- (D) Deliveries to Mexico of water in satisfaction of the obligations of Part III of the Treaty of February 3, 1944, and, separately stated, water passing to Mexico in excess of treaty requirements;
- (E) Diversions of water from the mainstream of the Gila and San Francisco Rivers and the consumptive use of such water, for the benefit of the Gila National Forest."

This Calendar Year 2015 Colorado River Accounting and Water Use Report, Arizona, California, and Nevada presents the records compiled pursuant to the Consolidated Decree for Calendar Year 2015. Copies of this and previous years' reports may be found on the Bureau of Reclamation's (Reclamation) website at: www.usbr.gov/lc/region/g4000/wtracct.html.

## ARTICLE V(A): RECORDS OF RELEASES OF WATER THROUGH REGULATORY STRUCTURES CONTROLLED BY THE UNITED STATES

In accordance with Article V(A) of the Consolidated Decree, Table 3 documents records of releases of Colorado River water through Glen Canyon, Hoover, Davis, Parker, Palo Verde, Imperial and Laguna Dams. Records of releases through Glen Canyon and Hoover Dams are provided by Reclamation. Records of releases through Davis, Parker, Palo Verde, Imperial and Laguna Dams are provided by the United States Geological Survey (USGS) and are based upon measurements at or downstream of the dams.

The record of river flow through Headgate Rock Dam is computed using the record of flow at USGS gaging station 09247520 "Colorado River below Parker Dam, Arizona-California," and deducting from it the record of flow at the USGS gaging station 09428500 "Diversions for Colorado River Indian Reservation Main Canal near Parker, Arizona" measured at Headgate Rock Dam.

The releases for Imperial Dam represent flow below Imperial Dam alone and do not include diversions into the All-American Canal (AAC) and the Gila Gravity Main Canal (GGMC).

Table 3. Releases of Water Through Regulatory Structures Controlled by the United States, Calendar Year 2015. (Values are in acre-feet.)

STRUCTURE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	TOTAL
Glen Canyon Dam	862,083	589,193	649,251	600,309	698,703	800,000	1,048,221	799,328	714,102	600,242	576,911	857,318	8,795,661
Hoover Dam	832,489	600,170	1,033,989	1,087,135	870,891	868,221	767,351	802,766	722,908	578,179	630,956	618,945	9,414,000
Davis Dam	685,700	646,600	998,500	1,069,000	915,400	876,700	827,500	862,200	843,000	709,400	626,100	554,000	9,614,100
Parker Dam	362,000	498,200	730,400	762,600	546,200	604,700	607,500	595,100	475,800	463,800	390,100	333,800	6,370,200
Headgate Rock Dam	334,320	461,380	681,210	693,280	484,560	538,540	541,410	529,120	427,110	429,400	358,960	300,730	5,780,020
Palo Verde Diversion Dam	302,200	400,900	598,500	619,400	433,800	467,900	464,300	455,200	383,700	359,400	326,800	283,800	5,095,900
Imperial Dam	18,140	15,330	26,110	28,650	37,980	18,150	22,750	26,860	17,920	15,250	16,220	15,990	259,350
GGMC Diversion for Mittry Lake	564	676	734	787	829	778	847	799	780	778	578	619	8,769
Sum Imperial Dam and Mittry Lake	18,704	16,006	26,844	29,437	38,809	18,928	23,597	27,659	18,700	16,028	16,798	16,609	268,119
Laguna Dam	26,020	22,420	33,130	34,450	44,080	27,980	28,950	32,780	23,800	18,330	22,850	22,860	337,650

## ARTICLE V(B): RECORDS OF DIVERSIONS, RETURN FLOWS AND CONSUMPTIVE USE

In accordance with Article V(B) of the Consolidated Decree, Tables 4 through 6 document the final records of diversions of water from the mainstream of the Colorado River, return flow to the mainstream, and the consumptive use of such water within the Lower Division States of Arizona, California, and Nevada.

The tabulations, based upon records furnished by Reclamation, the United States Geological Survey (USGS), the International Boundary and Water Commission, water users, or other agencies, document quantities of water drawn by surface diversion from the mainstream of the Colorado River, pumped directly from the mainstream, or pumped from wells in the Colorado River aquifer.

Measured return flow to the mainstream, estimates of unmeasured return flow to the mainstream, and consumptive use are listed for points of diversion and return when that information is available. Unmeasured returns are computed by multiplying a water user's diversion by an unmeasured return flow factor. Reclamation continues to refine estimates of unmeasured returns.

No person or entity is entitled to divert or use Colorado River water without an entitlement. An entitlement is an authorization to beneficially use Colorado River water pursuant to: (1) a right decreed by the Supreme Court, (2) a contract with the United States through the Secretary of the Interior, or (3) a Secretarial reservation of water. The listing of a use in this report should not be interpreted as an entitlement or an indication that the use is authorized.

For the states of Arizona and California, the records of diversions, return flows, and consumptive use are organized into two separate tabulations. The first tabulation lists water users whose diversions are typically reported daily and monthly.

The second tabulation, entitled "State of (State) Supplemental Tabulation, Calendar Year 2015" lists water users whose diversions are typically reported annually by either the USGS or the water user. For those diversions reported by the USGS, the USGS verifies the crops being grown and uses evapotranspiration methodologies to estimate the crop consumptive use; the USGS then applies irrigation efficiency coefficients to derive the estimated diversions.

For those water users whose diversions are made from the Topock Marsh Inlet Canal, All-American Canal, or the Gila Gravity Main Canal, diversions include each user's proportionate share of the total canal losses, which are added to the delivery taken by each user at its turnout from the canal. The portion of the canal loss which returns to the mainstream is provided to each water user as a measured return flow credit.

For the areas downstream of the Northerly International Boundary (NIB), Reclamation does not consider pumping of wells from the flood plain or the underlying aquifer to be a diversion of Colorado River water. This position is based on the following: the ground water can reasonably be assumed to be flowing towards Mexico and therefore, not to be flowing toward the Colorado River upstream of Mexico's point of diversion near NIB. As such, this water does not return to the river to be made available for consumptive use in the United States or in satisfaction of the Mexican Treaty obligation. In accordance with this position, Reclamation discontinued reporting these wells beginning in 2004. If hydrologic conditions change, Reclamation will address the need to report these wells.

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<sup>&</sup>lt;sup>1</sup> Summary Description of Accounting for Water Use in the Yuma Area Beginning with Calendar Year 2003. Available on Reclamation's website at: http://www.usbr.gov/lc/region/g4000/4200Rpts/YumaWtrAcct.pdf

Table 4a. State of Arizona - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2015. (Values are in acre-feet.)  WATER USER  JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC TO														
WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	TOTAL
Lake Mead National Recreation Area National Park Service														
Lake Mead Diversions at Temple Bar	Diversion	12	10	12	11	13	14	17	17	15	7	5	4	137
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	12	10	12	11	13	14	17	17	15	7	5	4	137
Lake Mead National Recreation Area														
National Park Service														
Lake Mohave Diversions	Diversion	12	12	14	15	17	21	19	17	15	15	10	10	177
Katherine Landing and Willow Beach	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	12	12	14	15	17	21	19	17	15	15	10	10	177
Bureau of Reclamation	<b>5</b>		•							•				
Davis Dam Diversion	Diversion	2	2	2	2	3	2	2	2	3	2	2	3	27
	Measured Returns	2	2	2	2	3	2	1	2	3	2	2	3	26
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
Delli es LO'es	Consumptive Use	U	0	0	0	0	0	1	0	0	0	0	0	1
Bullhead City	Diversian	004	500	700	000	004	000	040	000	040	705	000	044	0.400
Pumped from wells	Diversion	631	596	736	826	894	896	919	963	912	795	690	611	9,469
Mohave County Parks, Lake Mohave diversion	Diversion	0	0	2 0	1	1	2	2	1	2	1	0	0	12
	Measured Returns Unmeasured Returns		197	244	273	0 295	0 296	304	0 318	0 302	0 263	0 228	0 202	0 3,130
		208 423	399	494	554	600	602	617	646	612	533	462	409	6,351
Mohave Water Conservation District	Consumptive Use	423	399	494	554	000	002	017	040	012	555	402	409	0,331
Pumped from wells	Diversion	55	50	60	68	69	78	94	84	78	77	64	63	840
i diriped from wells	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	040
	Unmeasured Returns	18	17	20	22	23	26	31	28	26	25	21	21	278
	Consumptive Use	37	33	40	46	46	52	63	56	52	52	43	42	562
Mohave Valley I.D.D.	Consumptive Cos	0.					<u> </u>							002
Pumped from wells	Diversion	1,393	1,901	2,604	3,057	3,222	3,975	3,439	4,055	3,686	1,682	1,605	1,021	31,640
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	641	917	1,212	1,399	1,480	1,822	1,581	1,868	1,753	780	738	470	14,661
	Consumptive Use	752	984	1,392	1,658	1,742	2,153	1,858	2,187	1,933	902	867	551	16,979
Fort Mojave Indian Reservation														
Pumped from river for agriculture use	Diversion	1,709	5,578	5,964	5,934	8,018	9,721	9,251	9,507	4,982	2,057	2,756	1,597	67,074
Pumped from wells for domestic use	Diversion	50	23	129	55	182	311	426	481	328	171	176	109	2,441
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	809	2,669	2,815	2,731	3,765	4,600	4,450	4,598	2,572	1,035	1,411	785	32,240
	Consumptive Use	950	2,932	3,278	3,258	4,435	5,432	5,227	5,390	2,738	1,193	1,521	921	37,275
Golden Shores Water Conservation District														
Pumped from wells	Diversion	23	23	24	29	31	40	45	36	39	32	25	31	378
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	8	7	8	10	10	13	15	12	13	11	8	10	125
	Consumptive Use	15	16	16	19	21	27	30	24	26	21	17	21	253
Havasu National Wildlife Refuge	S	_	_	0.555	0.5==	0			0.0		4.655			05.55
Firebreak Inlet Canal	Diversion	0	0	2,560	6,670	3,570	3,390	2,420	2,040	3,000	1,290	328	30	25,298
Farm Ditch	Diversion <sup>1</sup>	52	95	1,341	1,349	582	572	444	520	598	230	32	3	5,818
Pumped from well	Diversion	10	11	15	17	20	25	27	26	20	17	12	12	212
	Measured Returns <sup>2</sup>	0	0	-377	-171	1	0	0	0	0	0	0	0	-547
	Unmeasured Returns	55	93	3,778	7,222	3,671	3,509	2,544	2,276	3,184	1,353	327	40	28,052
	Consumptive Use	7	13	515	985	500	478	347	310	434	184	45	5	3,823

Table 4a. State of Arizona - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2015. (Values are in acre-feet.)  WATER USER  JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC TO														
WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	TOTAL
Lake Havasu City														
Pumped from wells	Diversion	792	728	857	908	991	1,104	1,184	1,206	1,147	1,001	862	806	11,586
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	301	277	326	345	377	420	450	458	436	380	328	306	4,404
	Consumptive Use	491	451	531	563	614	684	734	748	711	621	534	500	7,182
Central Arizona Project														
Pumped from Lake Havasu	Diversion	180,492	109,441	146,368	154,414	177,030	77,195	70,484	69,587	167,508	115,253	120,080	130,170	1,518,022
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
Dunalia Water III C	Consumptive Use	180,492	109,441	146,368	154,414	177,030	77,195	70,484	69,587	167,508	115,253	120,080	130,170	1,518,022
Brooke Water, LLC	Diversion	20	20	22	34	27	42	FO	40	40	40	26	24	450
Pumped from river and wells	Measured Returns	32 0	30	33	0	37 0	43 0	50 0	42 0	42 0	40 0	36 0	31 0	450 0
	Unmeasured Returns	11	10	11	11	12	14	17	14	14	13	12	10	149
	Consumptive Use	21	20	22	23	25	29	33	28	28	27	24	21	301
Town of Parker	Consumptive Cac	21	20		20	20	25	00	20	20	21	27	21	001
Pumped from well	Diversion	49	49	57	65	74	85	84	90	82	66	56	53	810
· ampou nom nom	Measured Returns	18	16	18	17	19	17	26	19	20	20	17	18	225
	Unmeasured Returns	14	14	16	19	21	24	24	26	23	19	16	15	231
	Consumptive Use	17	19	23	29	34	44	34	45	39	27	23	20	354
Colorado River Indian Reservation														
Diversion at Headgate Rock Dam	Diversion	27,680	36,820	49,190	69,320	61,640	66,160	66,090	65,980	48,690	34,400	31,140	33,070	590,180
Pumped from river and wells	Diversion	276	315	406	452	531	649	689	681	557	462	354	337	5,709
·	Measured Returns	19,687	20,516	23,046	24,692	24,075	23,843	25,555	22,059	21,035	20,122	17,628	19,999	262,257
	Unmeasured Returns	1,538	2,042	2,728	3,837	3,419	3,674	3,673	3,666	2,709	1,917	1,732	1,837	32,772
	Consumptive Use	6,731	14,577	23,822	41,243	34,677	39,292	37,551	40,936	25,503	12,823	12,134	11,571	300,860
Ehrenburg Improvement Association														
Pumped from river	Diversion	25	19	21	26	28	30	30	33	35	29	25	25	326
	Measured Returns	7	2	4	2	3	4	4	5	3	7	2	5	48
	Unmeasured Returns	7	5	6	7	8	9	9	9	10	8	7	7	92
	Consumptive Use	11	12	11	17	17	17	17	19	22	14	16	13	186
Cibola Valley I.D.D.														
Pumped from river and well	Diversion	273	909	1,045	1,503	969	890	1,277	1,326	912	564	508	378	10,554
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	78 105	259	298	428	276	254	364 913	378	260	161	145	108	3,009
Mohave County Water Authority	Consumptive Use	195	650	747	1,075	693	636	913	948	652	403	363	270	7,545
Pumped from river	Diversion	62	168	219	271	290	324	198	159	213	135	0	0	2,039
i diliped ilolli livei	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	2,009
	Unmeasured Returns	18	48	62	77	83	92	56	45	61	38	0	0	580
	Consumptive Use	44	120	157	194	207	232	142	114	152	97	0	0	1,459
Hopi Tribe		,	0											., .50
Pumped from river	Diversion	284	523	759	713	360	305	362	436	430	277	281	151	4,881
·	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	81	149	216	203	103	87	103	124	123	79	80	43	1,391
	Consumptive Use	203	374	543	510	257	218	259	312	307	198	201	108	3,490
GSC Farm, LLC														
Pumped from river	Diversion	189	261	317	382	232	300	351	355	226	194	20	0	2,827
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	54	74	90	109	66	86	100	101	64	55	6	0	805
	Consumptive Use	135	187	227	273	166	214	251	254	162	139	14	0	2,022

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	TOTAL
Arizona Game and Fish Commission Pumped from river	Diversion Measured Returns Unmeasured Returns Consumptive Use	0 0 0	36 0 10 26	27 0 8 19	421 0 120 301	49 0 14 35	262 0 75 187	238 0 68 170	528 0 150 378	548 0 156 392	224 0 64 160	287 0 82 205	21 0 6 15	2,641 0 753 1,888
Cibola National Wildlife Refuge Pumped from river	Diversion Measured Returns Unmeasured Returns	851 0 323	796 0 302	1,335 0 507	1,545 0 587	1,355 0 515	2,325 0 884	1,398 0 531	1,616 0 614	1,754 0 667	1,250 0 475	1,033 0 393	644 0 245	15,902 0 6,043
Imperial National Wildlife Refuge Pumped from river	Diversion Measured Returns Unmarried Returns	528 76 0 29 47	494 225 0 86 139	828 172 0 65 107	958 199 0 76 123	166 0 63 103	1,441 229 0 87 142	240 0 91 149	1,002 245 0 93 152	1,087 213 0 81 132	775 48 0 18 30	54 0 21 33	399 22 0 8 14	9,859 1,889 0 718
U.S. Army Yuma Proving Grounds Diversion at Imperial Dam Pumped from wells	Diversion Diversion Measured Returns Unmeasured Returns	1 13 0 0	0 12 0 0	0 18 0 0	0 58 0 0	1 57 0 0	2 79 0 0	2 68 0 0	0 57 0 0	4 54 0 0	1 27 0 0	0 21 0 0	2 17 0 0	1,171 13 481 0
Gila Monster Farms Diversion at Imperial Dam	Consumptive Use  Diversion  Measured Returns  Unmeasured Returns  Consumptive Use	253 20 96 137	522 16 198 308	774 26 294 454	992 51 377 564	58 647 30 246 371	283 13 108 162	302 8 115 179	57 502 19 191 292	58 525 12 200 313	289 9 110 170	340 17 129 194	591 30 225 336	6,020 251 2,289 3,480
Wellton-Mohawk I.D.D. Diversion at Imperial Dam	Diversion GGMC Return Dome Return MOD Return Total Returns Unmeasured Returns Consumptive Use	17,614 1,573 327 9,760 11,660 0 5,954	24,128 844 310 8,870 10,024 0	38,324 1,421 249 9,690 11,360 0 26,964	45,810 2,631 250 8,440 11,321 0 34,489	35,634 1,839 476 9,300 11,615 0 24,019	33,762 1,673 251 9,140 11,064 0 22,698	30,943 868 235 8,940 10,043 0 20,900	32,972 1,412 205 8,780 10,397 0 22,575	37,475 942 133 9,440 10,515 0 26,960	33,343 1,151 358 9,500 11,009 0 22,334	21,569 1,229 416 6,960 8,605 0 12,964	19,333 1,100 281 7,350 8,731 0	370,907 16,683 3,491 106,170 126,344 0 244,563
City of Yuma Diversion at Imperial Dam via AAC Diversion at Imperial Dam via GGMC Pumped from river for Yuma East Wetlands	Diversion Diversion Diversion Measured Returns Unmeasured Returns Consumptive Use	1,228 775 25 938 0 1,090	1,112 670 30 777 1 1,034	1,342 854 36 883 1	1,333 844 33 840 1	1,382 778 30 738 1	1,651 389 28 741 1	1,789 431 41 749 1	1,823 422 31 901 1	1,700 254 28 859 1	1,557 396 33 869 1 1,116	1,393 759 30 930 1 1,251	1,385 666 26 968 0 1,109	17,695 7,238 371 10,193 10
U.S. Marine Corps Air Station Yuma Diversion at Imperial Dam	Diversion Measured Returns Unmeasured Returns Consumptive Use	102 0 0 102	80 0 0 80	99 0 0 99	128 0 0	137 0 0 137	139 0 0 139	154 0 0 154	139 0 0 139	117 0 0 117	98 0 0 98	69 0 0 69	74 0 0 74	1,336 0 0 1,336
Union Pacific Railroad Diversion at Imperial Dam	Diversion Measured Returns Unmeasured Returns Consumptive Use	4 0 2 2	4 0 2 2	4 0 2 2	4 0 2 2	4 0 2 2	4 0 2 2	4 0 2 2	4 0 2 2	4 0 2 2	4 0 2 2	4 0 2 2	4 0 2 2	48 0 24 24

Table 4a. State of Arizona - Records of	Diversion, Returns,	and Cons	umpti	ve Use	, Caler	dar Ye	ar 201	5. (Val	ues are	in acr	e-feet.)	)		
WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	TOTAL
University of Arizona														
Diversion at Imperial Dam	Diversion	10	34	45	68	50	107	106	109	71	90	82	46	818
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0 34	0 45	0	0	107	106	100	0 71	0 90	0	0	0
Yuma Union High School District	Consumptive Use	10	34	45	68	50	107	106	109	71	90	82	46	818
Delivery at East Main Canal	Diversion	4	5	7	11	16	19	22	21	13	3	15	11	147
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	1	1	2	3	4	5	6	5	3	1	4	3	38
	Consumptive Use	3	4	5	8	12	14	16	16	10	2	11	8	109
Desert Lawn Memorial Park	D:	•				0								00
Delivered by the City of Yuma	Diversion Measured Returns	0	0	1 0	2	2	3	3	3 0	4 0	2	1 0	1 0	23 0
	Unmeasured Returns	0	0	0	1	1	1	1	1	1	1	0	0	7
	Consumptive Use	0	1	1	1	1	2	2	2	3	1	1	1	16
North Gila Valley Irrigation District	·													
Diversion at Imperial Dam	Diversion	1,950	3,300	4,868	5,670	4,585	3,978	3,846	2,639	3,460	4,068	3,376	2,342	44,082
	Measured Returns	1,774	1,951	2,693	2,893	2,503	2,224	2,017	1,513	1,870	2,379	2,233	1,690	25,740
	Unmeasured Returns Consumptive Use	267 -91	452 897	667 1,508	777 2,000	628 1,454	545 1,209	527 1,302	362 764	474 1,116	557 1,132	463 680	321 331	6,040 12,302
Yuma Irrigation District	Consumptive ose	-91	091	1,506	2,000	1,454	1,209	1,302	704	1,110	1,132	000	331	12,302
Diversion at Imperial Dam <sup>4</sup>	Diversion	2,988	4,977	7,499	9,446	7,176	5,420	6,845	3,796	6,031	6,481	5,068	3,562	69,289
Pumped from wells	Diversion	21	49	150	230	58	44	71	45	48	31	11	57	815
·	Measured Returns	974	1,121	1,676	2,277	1,744	1,218	1,401	951	1,266	1,504	1,285	941	16,358
	Unmeasured Returns	641	1,071	1,629	2,061	1,541	1,164	1,473	818	1,295	1,387	1,082	771	14,933
	Consumptive Use	1,394	2,834	4,344	5,338	3,949	3,082	4,042	2,072	3,518	3,621	2,712	1,907	38,813
Yuma Mesa I.D.D.	Diversion	0.000	0.000	14 255	17.070	17 206	20.740	22 245	20.450	14.077	12.640	11 770	0.070	101 151
Diversion at Imperial Dam	Measured Returns <sup>5</sup>	8,888 2,666	9,823 3,183	14,355 2,823	17,979 4,143	17,286 2,844	20,740 5,865	22,245 9,194	20,159 8,425	14,977 3,539	13,649 692	11,778 3,546	9,272 3,946	181,151 50,866
	Unmeasured Returns	1,422	1,572	2,023	2,877	2,766	3,318	3,559	3,225	2,396	2,184	1,884	1,484	28,984
	Consumptive Use	4,800	5,068	9,235	10,959	11,676	11,557	9,492	8,509	9,042	10,773	6,348	3,842	101,301
Unit "B" I.D.D.		,	-,	-,	-,	,	,	-, -	-,	-,-	-, -	-,	-,-	- ,
Diversion at Imperial Dam	Diversion	1,173	1,544	2,054	2,918	2,759	3,119	3,586	3,464	2,202	2,186	2,056	1,222	28,283
	Measured Returns 5	423	553	474	711	482	999	1,610	1,481	609	112	624	665	8,743
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
Arizona State Land Department	Consumptive Use	750	991	1,580	2,207	2,277	2,120	1,976	1,983	1,593	2,074	1,432	557	19,540
Arizona State Land Department  Pumped from river and wells for agriculture use	Diversion	461	727	1,047	1,249	1,047	1,032	980	1,149	754	648	520	586	10,200
Pumped from river and wells for domestic use	Diversion	4	3	3	3	3	4	4	4	4	3	3	3	41
·	Measured Returns	7	5	9	17	10	4	3	6	4	3	6	10	84
	Unmeasured Returns	163	255	367	438	368	363	344	404	265	228	183	206	3,584
	Consumptive Use	295	470	674	797	672	669	637	743	489	420	334	373	6,573
Fort Yuma Indian Reservation Pumped from river for Yuma East Wetlands	Diversion	54	106	132	80	107	152	135	161	109	67	107	24	1 2//
Pumped from river for Yuma East Wetlands  Pumped from river for agriculture use (Cha Cha Farms)	Diversion	2	106	132	3	3	152	3	3	109	6	4	34 2	1,244 42
Surface delivery to Ranch "5"	Diversion	10	39	82	67	17	26	3	29	72	44	27	29	445
Pumped from wells for domestic use <sup>6</sup>	Diversion	3	2	2	3	3	3	4	2	2	2	2	2	30
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	29	63	92	62	56	80	65	85	76	48	60	28	744
	Consumptive Use	40	86	130	91	74	106	80	110	110	71	80	39	1,017

Table 4a. State of Arizona - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2015. (Values are in acre-feet.)  WATER USER  JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC TOTA														
WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	TOTAL
Yuma County Water Users' Association														
Diversion at Imperial Dam	Diversion	20,949	26,883	39,708	49,143	31,033	26,758	32,307	21,279	21,549	37,925	29,443	21,741	358,718
Pumped from wells	Diversion	50	43	47	7	18	87	113	120	21	112	109	76	803
	Measured Returns	11,088	9,796	10,576	10,849	10,597	9,445	7,481	7,234	11,086	11,901	11,800	11,800	123,653
	Unmeasured Returns	441	565	835	1,032	652	564	681	449	453	799	621	458	7,550
	Consumptive Use	9,470	16,565	28,344	37,269	19,802	16,836	24,258	13,716	10,031	25,337	17,131	9,559	228,318
Cocopah Indian Reservation														
Diversion at Imperial Dam	Diversion	0	103	84	42	0	0	0	0	3	0	0	49	281
Pumped from wells <sup>7</sup>	Diversion	98	122	166	180	220	267	291	280	220	184	131	129	2,288
	Measured Returns	0	3	2	1	0	0	0	0	0	0	0	4	10
	Unmeasured Returns	33	77	85	75	75	91	99	95	76	63	45	61	875
	Consumptive Use	65	145	163	146	145	176	192	185	147	121	86	113	1,684
Bureau of Reclamation's Yuma Area Office														
Pumped from well	Diversion	0	0	0	4	2	1	0	0	0	35	12	0	54
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	0	0	0	4	2	1	0	0	0	35	12	0	54
Pumped from the South Gila Wells (DPOCs) 8	Measured Returns	1,519	0	0	0	0	0	2,881	3,907	3,770	3,290	4,003	4,224	23,594
	Unmeasured Returns	-1,519	0	0	0	0	0	-2,881	-3,907	-3,770	-3,290	-4,003	-4,224	-23,594
	Consumptive Use	0	0	0	0	0	0	0	0	0	0	0	0	0
Other users diverting water from the Colorado														
River via pumps or wells from Davis Dam to the	Diversion	557	884	1,337	1,566	1,593	1,572	1,743	1,701	1,183	879	761	618	14,394
Northerly International Boundary 9	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	198	312	474	559	565	561	625	600	416	308	268	216	5,102
	Consumptive Use	359	572	863	1,007	1,028	1,011	1,118	1,101	767	571	493	402	9,292
Arizona Totals														
	Diversion	272,267	233,826	327,313	386,160	365,022	268,622	265,821	250,947	326,922	262,482	238,132	231,082	3,428,596
	Measured Returns	50,783	47,965	53,215	57,645	54,664	55,439	60,973	56,919	54,591	51,919	50,698	53,034	647,845
	Unmeasured Returns	5,967	11,745	19,155	25,741	21,106	22,775	19,028	17,109	14,342	9,093	6,294	3,664	176,019
	Consumptive Use	215,517	174,116	254,943	302,774	289.252	190,408	185,820	176,919	257.989	201,470	181,140	174,384	2,604,732

Yuma Mesa Conduit Outlet Flows = 6,650 AF

Protective and Regulatory Pumping Unit = 40,244 AF

<sup>&</sup>lt;sup>1</sup> Diversion values are normally positive. Should negative diversion values occur, water is flowing from the canal to the river.

<sup>&</sup>lt;sup>2</sup>The South Dike is the point of measured return flow for the Refuge and meter readings will normally indicate a positive flow of water from the Refuge into the river. If the flow reverses and water flows into the Refuge instead, a negative value will be recorded; when this occurs, this is considered a diversion.

<sup>&</sup>lt;sup>3</sup> MOD return flow credit is the measured flow at Station 0+00. When comparing this return value to the "Water Bypassed Pursuant to IBWC Minute No. 242", differences can result due to a combination of transmission loss, DPOC and Yuma Mesa Conduit discharge into the MODE, MODE water that has been desalinated, and MODE water discharged to the river. During periods of sustained flow in the Gila River this measurement may include both Colorado River and Gila River water. At such times Reclamation will determine how best to differentiate return flows from the two sources.

<sup>&</sup>lt;sup>4</sup> Diversion does not include water delivered to users (George Ogram, Ogram Boys' Enterprises, and some ASLD lands) located outside of District boundaries.

<sup>&</sup>lt;sup>5</sup> YMIDD receives 85 percent of the return flows from the Yuma Mesa Conduit Outlet and the Protective and Regulatory Pumping Unit; Unit B receives the remaining 15 percent.

<sup>&</sup>lt;sup>6</sup> Diversion is an estimate of the amount of domestic water required by FYIR, AZ.

<sup>&</sup>lt;sup>7</sup> Diversion amounts include pumpage from wells AEW-15, 16, and the Cocopah Bend R.V. Park. The reported diversion includes deliveries to the Cocopah Tribe's Trust lands and 608 AF to the Tribe's Fee lands located within PPR No. 7.

<sup>&</sup>lt;sup>8</sup> Until comprehensive modeling of the Yuma area to determine how unmeasured returns are affected by pumping of the DPOC wellfield is complete, this pumpage is added to Arizona's measured returns and subtracted from Arizona's unmeasured returns.

<sup>&</sup>lt;sup>9</sup> For additional details, see Table 4b.

Table 4b. State of Arizona - Supplemental Tabulation, Calendar Year 2015. (Values are in acre-feet.)

WATER USER	USGS Well #	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	TOTAL
Lee Ferry to Davis Dam														
Marble Canyon Company		0	1	1	1	1	2	2	2	1	1	1	0	13
Subtotal	Diversion	0	1	1	1	1	2	2	2	1	1	1	0	13
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	1	1	1	1	1	0	0	5
	Consumptive Use	0	1	1	1	1	1	1	1	0	0	1	0	8
Davis Dam to Parker Dam														
McAlister Family Trust		0	0	1	1	1	1	1	1	1	1	1	1	10
Crystal Beach Water Conservation District		7	7	8	9	10	11	11	11	10	10	9	8	111
EPCOR Water Arizona, Inc.		50	50	55	56	57	60	67	73	68	61	60	57	714
Arizona State Parks (Windsor Beach)		2	1	1	2	2	2	3	3	2	2	2	1	23
Subtotal	Diversion	59	58	65	68	70	74	82	88	81	74	72	67	858
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	20	20	22	24	26	27	29	32	29	24	25	23	301
	Consumptive Use	39	38	43	44	44	47	53	56	52	50	47	44	557
Parker Dam to Imperial Dam														
Hillcrest Water Company		2	2	2	2	2	2	2	2	2	2	2	2	24
Springs Del Sol Domestic Water Improvement District		0	0	0	0	0	0	1	1	0	1	0	1	4
Rayner Ranches	AEP-9, AEW-35	0	187	372	453	745	745	745	745	348	80	80	0	4,500
North Baja Pipeline		11	18	32	28	18	34	47	28	24	15	14	12	281
BLM Permitees (LHFO and YFO)		60	75	59	68	73	97	96	90	75	89	59	51	892
Fisher's Landing Water and Sewer, LLC		1	1	1	1	1	2	1	2	1	1	1	1	14
Shepard Water Company		1	1	2	2	2	2	2	2	2	2	2	2	22
Subtotal	Diversion	75	284	468	554	841	882	894	870	452	190	158	69	5,737
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	27	98	164	195	294	309	316	304	158	66	55	22	2,008
Below Imperial Dam	Consumptive Use	48	186	304	359	547	573	578	566	294	124	103	47	3,729
JRJ Partners, LLC	AEP-1, AEW-3	50	32	98	123	121	69	120	117	32	105	110	98	1,075
Cha Cha. LLC	AEP-2/3,AEW-4/5,ADW-3	83	238	166	262	152	100	129	242	210	92	174	85	1,933
Beattie Farms Southwest (Russell Youmans)	ADW-2	104	11	23	81	47	0	0	69	107	151	58	107	758
BLM Permittees (YFO)	ADW-2	8	7	5	7	11	6	14	12	8	12	15	4	109
BLM (leased by L. Pratt) <sup>1</sup>		17	21	29	31	38	46	50	48	38	32	22	22	394
George Ogram <sup>2</sup>	AEW-9	31	77	110	80	0	0	22	0	43	35	15	29	442
Ogram Boys' Enterprises <sup>2</sup>	ALW-9	17	14	174	150	91	152	163	45	38	26	25	22	917
John Peach (City of Yuma) <sup>1</sup>	AEW-13, 48	14	17	23	25	31	37	40	39	31	26	18	18	319
Arizona Public Service Company	ALW 10, 40	19	38	49	59	56	46	55	0	0	0	0	0	322
BLM (leased by Monty Lee) 1	AEW-14, ADP-1	12	15	20	22	26	32	35	34	27	22	16	15	276
Armon Curtis <sup>1</sup>	AEP-4	10	13	17	19	23	28	31	29	23	19	14	14	240
Power 1	ADP-3/4	13	17	23	25	30	36	40	38	30	25	18	18	313
Griffin Ranches <sup>1</sup>	אטו טוד	9	11	23 15	23 17	20	25	27	26	20	23 17	12	12	211
Milton Phillips <sup>1</sup>		5	6	8	8	10	12	13	13	10	8	6	6	105
Victor Power <sup>1</sup>		2	2	3	4	4	5	6	5	4	4	3	2	44
Gary Pasquinelli	ADP-5	29	22	40	30	21	20	20	24	28	40	24	30	328
Subtotal	Diversion	423	541	803	943	681	614	765	741	649	614	530	482	7,786
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	151	194	288	340	245	224	279	263	228	217	188	171	2,788
	Consumptive Use	272	347	515	603	436	390	486	478	421	397	342	311	4,998
Total Arizona Supplemental Tabulation	Diversion	557	884	1 227	1,566	1,593	1 572	1,743	1,701	1,183	879	761	618	14,394
Total Alizona Supplemental Tabulation	Measured Returns	33 <i>1</i> 0	884 0	1,337 0	1,366	1,593	1,572 0	1,743	1,701	1,183	879 0	761	018	14,394
	Unmeasured Returns	198	312	474	559	565	561	625	600	416	308	268	216	5,102
		359	572	474 863	1,007	1.028				767	571	493	402	9,292
	Consumptive Use	359	3/2	803	1,007	1,028	1,011	1,118	1,101	101	5/1	493	402	9,292

<sup>&</sup>lt;sup>1</sup> Calculated by the USGS using field crop verification and ET methodologies. A description of this methodology is included in the Significant Documents.

<sup>&</sup>lt;sup>2</sup> George Ogram and Ogram Boys' Enterprises have water wheeled to them by YID from the GGMC.

Table 5a. State of California - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2015. (Values are in acre-feet.)

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Fort Mojave Indian Reservation														
Pumped from river for agriculture use	Diversion	511	1,005	2,005	2,317	1,571	1,443	1,087	2,008	2,116	579	346	127	15,115
Pumped from wells for domestic use	Diversion	5	2	3	5	4	5	5	4	5	5	3	3	49
•	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	238	465	928	1,073	728	669	505	930	980	270	161	60	7,007
	Consumptive Use	278	542	1,080	1,249	847	779	587	1,082	1,141	314	188	70	8,157
City of Needles				,	, -				,	,				-,
Pumped from wells <sup>1</sup>	Diversion	106	107	132	158	167	187	181	202	161	124	152	142	1,819
Tumpod nom wono	Measured Returns	26	23	26	25	26	26	29	28	27	26	25	26	313
	Unmeasured Returns	13	22	22	48	16	20	24	28	25	17	31	29	295
	Consumptive Use	67	62	84	85	125	141	128	146	109	81	96	87	1,211
Chemehuevi Indian Reservation	Concampave Coo	O.	02	01	00	120		120	110	100	0.	00	01	1,211
Pumped from river and wells	Diversion	12	11	15	14	23	25	20	26	14	11	10	40	221
Tumpod nom mon and wone	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	6	5	7	6	11	12	9	12	6	5	5	18	102
	Consumptive Use	6	6	8	8	12	13	11	14	8	6	5	22	119
Metropolitan Water District of Southern California	Consumptive Cac	•	J	Ū	J	12	10			J	· ·	J		113
Pumped from Lake Havasu	Diversion	104,934	54,259	86,138	104,523	108,699	103,626	107,504	107,286	103,856	102,236	98,027	100,509	1,181,597
i uniped nom Lake Havasu	Measured Returns	243	220	241	209	220	222	208	218	215	221	210	242	2.669
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	2,003
	Consumptive Use	104,691	54,039	85,897		•	103,404	~	107,068	103,641	102,015	97,817	100,267	1,178,928
Bureau of Reclamation and Government Camp	Consumptive esc	104,001	04,000	00,007	104,014	100,473	100,404	107,200	107,000	100,041	102,010	57,017	100,207	1,170,320
Diversion at Parker Dam <sup>1</sup>	Diversion	0	•	0	0	0	0	4	0	0	0	0	0	4
Diversion at Farker Dam	Diversion	0	0	0	0	0	0	1	0	0	0	0	0	1
	Measured Returns	0	0	0	0	0	•	0	_	0		0	0	0
	Unmeasured Returns	0	0	0	0	0	0	1	0	0	0	0	0	0
Coloredo Bivor Indian Bosometian	Consumptive Use	U	U	U	U	U	U	'	U	U	U	U	U	
Colorado River Indian Reservation	Diversion	400	044	200	255	405	F07	-7-F	A	405	201	250	٥٢٢	4.500
Pumped from river and wells	Diversion Diversion	193 34	241 30	329 36	355 45	435 51	527 60	575 61	554 72	435 59	364	259 41	255 34	4,522 573
Pumped from wells for Big River Development		0	0	0	45		0	0			50 0	0	0	
	Measured Returns			•		0			0	0				0
	Unmeasured Returns	95	113 158	152 213	167	203 283	245 342	265	261	206 288	173	125	120 169	2,125
Dala Varda Irrigation District	Consumptive Use	132	100	213	233	203	342	371	365	200	241	175	109	2,970
Palo Verde Irrigation District Diversion at Palo Verde Dam	Diversion	35,630	52,620	69,160	93,500	88,680	97,070	100,000	94,830	77,680	61,460	50,320	45,890	866,840
Diversion at Paio verde Dam	Measured Returns	,	,		,	,	,	,			,	,	,	
		30,399	28,711	33,357	35,952 5,236	37,257	37,431	39,276 5,600	36,960	36,350	36,481	33,878 2,818	33,214	419,266 48,543
	Unmeasured Returns	1,995 3,236	2,947 20,962	3,873 31,930	52,312	4,966 46,457	5,436 54,203	55,124	5,310 52,560	4,350 36,980	3,442 21,537	13,624	2,570	
Yuma Project Reservation Division	Consumptive Use	3,230	20,962	31,930	52,312	40,437	54,203	55,124	52,560	30,900	21,537	13,024	10,106	399,031
Indian Unit														
Diversion at Imperial Dam	Diversion	1,718	3,261	6,287	8,316	4,164	1,824	1,321	5,543	3,150	4,810	3,958	2,695	47,047
Pumped from wells for domestic use <sup>2</sup>	Diversion	34	42	58	63	76	93	101	97	77	64	45	45	795
	Measured Returns	68	78	115	133	27	48	38	163	135	145	218	200	1,368
	Unmeasured Returns	293	552	1,060	1,399	708	320	237	942	539	814	669	458	7,991
Bard Unit														
Diversion at Imperial Dam	Diversion	2,331	3,136	6,065	6,518	5,362	3,517	3,251	3,900	3,566	4,257	3,807	2,851	48,561
	Measured Returns	50	42	62	60	19	50	49	76	97	67	114	118	804
	Unmeasured Returns	389	524	1,013	1,089	895	587	543	651	596	711	636	476	8,110
Unassigned Yuma Project Reservation Division Meas	sured Returns 3	1,650	1,724	2,613	3,290	2,832	2,277	2,154	2,014	2,970	4,162	2,749	2,074	30,509
Total Yuma Project Reservation Division Consumptive	ve Use 4	1,633	3,519	7,547	8,926	5,121	2,152	1,652	5,694	2,456	3,232	3,424	2,265	47,621

Table 5a. State of California - Records of Diversion, Returns, and Consumptive Use, Calendar Year 2015. (Values are in acre-feet.)

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	TOTAL
City of Winterhaven														
Pumped from well	Diversion	9	9	9	12	12	6	6	9	6	9	9	8	104
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	3	3	3	4	4	2	2	3	2	3	3	3	35
	Consumptive Use	6	6	6	8	8	4	4	6	4	6	6	5	69
Imperial Irrigation District														
Diversion at Imperial Dam	Diversion	114,944	149,559	225,000	273,215	218,767	256,347	248,279	241,971	205,432	217,581	174,857	129,697	2,455,649
	Measured Returns	7,309	5,766	6,630	7,100	2,279	10,605	11,059	12,055	15,234	10,314	14,914	14,754	118,019
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
Delivery from Warren H. Brock Reservoir 5	Consumptive Use	9,368	13,238	16,475	10,017	17,955	8,043	13,295	6,075	13,549	10,306	9,076	15,906	143,303
Total IID Consumptive Use	Total Consumptive Use	117,003	157,031	234,845	276,132	234,443	253,785	250,515	235,991	203,747	217,573	169,019	130,849	2,480,933
Water Transferred to SDCWA for Mitigation <sup>6</sup>	Diversion	13,871	5,118	1,712	2,797	6,619	10,442	8,932	20,287	19,417	27,707	25,222	21,686	163,810
	Measured Returns	882	197	50	73	69	432	398	1,011	1,440	1,313	2,151	2,467	10,483
	Consumptive Use	12,989	4,921	1,662	2,724	6,550	10,010	8,534	19,276	17,977	26,394	23,071	19,219	153,327
Coachella Valley Water District														
Diversion at Imperial Dam	Diversion	19,891	22,229	27,418	33,116	32,211	34,808	34,087	39,388	33,767	28,341	29,939	25,186	360,381
	Measured Returns	1,265	857	808	861	336	1,440	1,518	1,962	2,504	1,343	2,554	2,865	18,313
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	18,626	21,372	26,610	32,255	31,875	33,368	32,569	37,426	31,263	26,998	27,385	22,321	342,068
Other users diverting water from the Colorado River														
via pumps or wells from Davis Dam to the	Diversion	477	654	947	973	1,038	1,255	1,314	1,340	1,171	940	668	660	11,437
Northerly International Boundary <sup>7</sup>	Measured Returns	9	11	15	16	20	24	26	25	20	17	12	11	206
	Unmeasured Returns	201	282	407	421	443	539	564	574	502	404	290	283	4,910
	Consumptive Use	267	361	525	536	575	692	724	741	649	519	366	366	6,321
California Totals														
	Diversion	294,700	292,283	425,314	525,927	467,879	511,235	506,725	517,517	450,912	448,538	387,663	329,828	5,158,521
	Measured Returns	41,901	37,629	43,917	47,719	43,085	52,555	54,755	54,512	58,992	54,089	56,825	55,971	601,950
	Unmeasured Returns	3,233	4,913	7,465	9,443	7,974	7,830	7,749	8,711	7,206	5,839	4,738	4,017	79,118
	Consumptive Use	258.934	262.979	390.407	478,782	434.775	458.893	457,516	460,369	398.263	398.916	335.176	285.746	4,620,756

<sup>&</sup>lt;sup>1</sup> Colorado River consumptive use in excess of 1,223 AF is offset by pumping from the LCWSP. For additional details, see Table 16.

<sup>&</sup>lt;sup>2</sup> Diversion is an estimate of the amount of domestic water required by YPRD Indian Unit.

<sup>&</sup>lt;sup>3</sup> Unassigned measured returns include drainage from the Indian Unit and the Bard Unit in the Reservation Division but excludes seepage from the AAC.

<sup>&</sup>lt;sup>4</sup> Calculated as the sum of diversions (96.403 AF) minus the sum of: measured returns (2,172 AF), unmeasured returns (16,101 AF) and unassigned measured returns (30,509 AF).

<sup>&</sup>lt;sup>5</sup> Colorado River water captured in the Warren H. Brock Reservoir and delivered to IID as consumptive use. Flow measurement is made at the Brock Reservoir outlet channel, Station 21+36.

<sup>&</sup>lt;sup>6</sup> As referenced in Column 7, Exhibit B, of the CRWDA and the IID/SDCWA Water Transfer Agreement, as amended, IID conserves water for transfer to SDCWA for delivery, by exchange from non-Colorado River sources, to the Salton Sea for mitigation purposes. For additional details, see Table 19.

<sup>&</sup>lt;sup>7</sup> For additional details, see Table 5b.

Table 5b. State of California - Supplemental Tabulation, Calendar Year 2015. (Values are in acre-feet.)

WATER USER	USGS Well #	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	TOTAL
Davis Dam to Parker Dam														
Southern California Gas <sup>1</sup>		1	0	1	2	2	10	13	15	11	9	1	0	65
Pacific Gas & Electric Company 1		9	11	15	16	20	24	26	26	20	17	12	12	208
Havasu Water Company 1		1	2	2	2	3	4	4	4	3	3	2	2	32
Vista Del Lago <sup>1</sup>		0	0	1	1	1	1	1	1	1	1	0	1	9
Wells reported under non-Federal subcontracts to LCWSP <sup>1</sup>		13	16	22	23	28	35	37	36	28	24	17	17	296
Wetmore, Kenneth C.		0	0	0	0	1	1	1	1	1	0	0	0	5
Williams, Jerry O. & Deloris P.		0	0	0	0	0	0	0	0	0	0	0	0	0
Carney, Jerome D.		0	0	0	0	0	0	0	0	0	0	0	0	0
Wetmore, Mark M.		0	0	1	1	1	1	1	1	1	1	1	0	9
Subtotal	Diversion	24	29	42	45	56	76	83	84	65	55	33	32	624
	Measured Returns <sup>2</sup>	9	11	15	16	20	24	26	25	20	17	12	11	206
	Unmeasured Returns	6	7	10	10	13	17	19	17	15	11	8	8	141
	Consumptive Use	9	11	17	19	23	35	38	42	30	27	13	13	277
Parker Dam to Imperial Dam														
Citrus Ranch (C.L. Lye)	CEW-16	0	0	0	0	0	0	0	0	0	0	0	0	0
Lake Enterprises		1	0	0	0	1	0	0	1	0	0	3	3	9
BLM Permitees 1		24	21	28	26	35	19	21	22	26	23	24	28	297
Subtotal	Diversion	25	21	28	26	36	19	21	23	26	23	27	31	306
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	6	5	6	6	8	5	5	6	7	5	7	8	74
	Consumptive Use	19	16	22	20	28	14	16	17	19	18	20	23	232
Below Imperial Dam														
Fort Yuma Indian Reservation														
Ranch 1 (Formerly Living Earth Farms) 3	CEW-2, CDP-3	23	29	40	43	52	64	69	67	53	44	31	31	546
Ranch 2 Parcel 3 (Formerly Living Earth Farms) 3	CEW-2, CDP-4	13	16	22	24	29	36	39	38	30	25	18	17	307
Ranch 3 (Formerly Living Earth Farms) 3	CEW-2, CDP-5	0	0	0	0	0	0	0	0	0	0	0	0	0
Ranch 4 (Formerly Mike Valdez) 3	CDP-1,2 CEW-01, CEW-15	71	89	122	131	161	195	213	205	161	135	96	94	1,673
Ranch 5 California	AAC diversion	23	87	181	149	37	57	7	65	159	98	60	63	986
Ranch 7 (Formerly Mike Valdez) 3	CDP-1,2 CEW-01, CEW-15	29	36	50	53	65	79	86	83	65	55	39	38	678
Ranch 15 (Formerly MivCo Packing) 3	CEW-14	32	40	54	59	72	87	95	91	72	60	43	42	747
Ranch 17 (Formerly Huerta Packing) <sup>3</sup>	CDP-6,7	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum of Pumping - FYIR, CA	Diversion	191	297	469	459	416	518	509	549	540	417	287	285	4,937
	Unmeasured Returns	85	133	209	206	186	230	228	246	241	187	128	128	2,207
Yuma Island in CA														
Arizona State Land Department Trust Lands <sup>3</sup>	Diversion	237	307	408	443	530	642	701	684	540	445	321	312	5,570
	Unmeasured Returns	104	137	182	199	236	287	312	305	239	201	147	139	2,488
Subtotals below Imperial Dam	Diversion	428	604	877	902	946	1,160	1,210	1,233	1,080	862	608	597	10,507
·	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	189	270	391	405	422	517	540	551	480	388	275	267	4,695
	Consumptive Use	239	334	486	497	524	643	670	682	600	474	333	330	5,812
Total California Supplemental Tabulation	Diversion	477	654	947	973	1,038	1,255	1,314	1,340	1,171	940	668	660	11,437
re	Measured Returns	9	11	15	16	20	24	26	25	20	17	12	11	206
	Unmeasured Returns	201	282	407	421	443	539	564	574	502	404	290	283	4,910
	Consumptive Use	267	361	525	536	575	692	724	741	649	519	366	366	6,321
	Consumptive Use	207	301	525	230	5/5	092	124	741	049	วาษ	300	300	0,327

<sup>&</sup>lt;sup>1</sup> Tabulated use is offset by pumping from the LCWSP. For additional details, see Table 16.

<sup>&</sup>lt;sup>2</sup> This measured return is provided to Pacific Gas & Electric Company alone for water that has been diverted and reinjected as part of its Topock Groundwater Remediation Project.

<sup>&</sup>lt;sup>3</sup> Calculated by the USGS using field crop verification and ET methodologies. A description of this methodology is included in the Significant Documents. Points of diversion for the Yuma Island in CA are AEP-02, AEP-03, AEW-04, AEW-05, ADW-03, CEP-01, CEP-02, CDW-02, CDW-05, CDW-07, CDW-08, CEW-07, CEW-09, CEW-12, CEW-13. See the USGS maps in the Significant Documents section.

Table 6. State of Nevada - Records	of Diversion, Returns,	and Con	sumpti	ve Use	, Calen	dar Yea	ar 2015	. (Value	es are i	n acre-	feet.)			
WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	TOTAL
Bureau of Reclamation														
Hoover Dam Diversion	Diversion	2	3	4	3	4	4	4	4	3	3	3	3	40
	Measured Returns	1	1	2	2	1	2	2	2	2	2	1	1	19
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	1	2	2	1	3	2	2	2	1	1	2	2	21
Robert B. Griffith Water Project														
Pumped from Lake Mead	Diversion	23,364	23,059	32,320	36,014	40,792	40,193	44,540	43,712	40,517	36,781	28,914	25,798	416,004
Lake Mead National Recreation Area National Park Service														
Pumped from Lake Mead	Diversion	19	19	31	31	35	44	49	46	32	26	21	19	372
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	19	19	31	31	35	44	49	46	32	26	21	19	372
Basic Water Company														
Pumped from Lake Mead	Diversion	370	338	337	387	402	468	665	500	478	499	380	429	5,253
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0 370	0 338	0 337	0 387	0	0 468	0 665	0	0 478	0 499	0 380	0 429	0 5,253
City of Henderson	Consumptive Use	370	330	331	301	402	400	000	500	4/0	499	300	429	5,255
Pumped from Lake Mead	Diversion	1,085	1,127	794	1,386	1,371	1,794	928	959	921	1,070	920	1,043	13,398
r umped nom Lake Mead	Measured Returns	0	0	0	1,300	1,371	1,794	920	959	0	0	920	1,043	13,390
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	1,085	1,127	794	1,386	1,371	1,794	928	959	921	1,070	920	1,043	13,398
Nevada Department of Wildlife		,	,		,	,-	, -				,		,-	-,
Pumped from Lake Mead	Diversion	32	34	43	47	47	49	49	50	49	49	51	51	551
•	Measured Returns	31	33	42	47	46	48	48	49	48	48	50	50	540
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	1	1	1	0	1	1	1	1	1	1	1	1	11
Pacific Coast Building Products														
Pumped from Lake Mead	Diversion	73	82	77	84	88	86	95	46	73	73	65	71	913
	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	73	82	77	84	88	86	95	46	73	73	65	71	913
Las Vegas Wash Return Flow <sup>1</sup>	Returns	18,986	16,925	19,468	17,478	17,993	17,430	17,845	18,415	17,544	18,888	18,513	18,724	218,209
Lake Mead National Recreation Area National Park Service														
Pumped from Lake Mohave - Cottonwood Cove	Diversion	14	13	15	13	13	16	18	19	19	13	11	13	177
Tampod nom Zako Monavo Gokonwood Govo	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	14	13	15	13	13	16	18	19	19	13	11	13	177
Big Bend Water District	<u> </u>													
Pumped from river	Diversion	231	229	286	293	327	383	454	399	363	371	279	239	3,854
	Measured Returns	167	174	198	199	194	204	226	207	176	175	150	132	2,202
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
ONIMA Bin Bond Oceans (in the	Consumptive Use	64	55	88	94	133	179	228	192	187	196	129	107	1,652
SNWA - Big Bend Conservation Area Pumped from wells	Diversion	^	0	0	^	0	0	0	0	^	^	^	0	^
Fumped from wells	Diversion  Measured Returns	0	0	0 0	0	0	0	0	0	0	0	0	0	0
	Unmeasured Returns	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive OSE	0	U	U	U	U	U	U	U	U	U	U	U	U

WATER USER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Fort Mojave Indian Reservation														
Pumped from wells	Diversion	211	337	442	547	465	452	432	584	385	381	294	153	4,68
·	Measured Returns	0	0	0	0	0	0	0	0	0	0	0	0	
	Unmeasured Returns	70	111	146	181	153	149	143	193	127	126	97	50	1,54
	Consumptive Use	141	226	296	366	312	303	289	391	258	255	197	103	3,137
Nevada Totals														
	Diversion	25,401	25,241	34,349	38,805	43,544	43,489	47,234	46,319	42,840	39,266	30,938	27,819	445,24
	Measured Returns	19,185	17,133	19,710	17,726	18,234	17,684	18,121	18,673	17,770	19,113	18,714	18,907	220,97
	Unmeasured Returns	70	111	146	181	153	149	143	193	127	126	97	50	1,540
	Consumptive Use	6,146	7,997	14,493	20,898	25,157	25,656	28,970	27,453	24,943	20,027	12,127	8,862	222,729
Nevada Colorado River Storage in Local Aquifer <sup>2</sup>		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	TOTAL
Las Vegas Valley Water District	BOY Balance													348,574
Ç	Injected	0	0	0	0	0	0	0	0	0	0	0	0	. (
	Withdrawn	0	0	0	0	0	0	0	0	0	156	115	75	346
	EOY Balance													348,228
City of North Las Vegas	BOY Balance													11,843
	Injected	0	0	0	0	0	0	0	0	0	0	0	0	(
	Withdrawn	0	0	0	0	0	0	0	0	0	0	0	0	(
	EOY Balance													11,843
														000 44
Total	BOY Cumulative Injected Stora	age												360,41
Total	BOY Cumulative Injected Store Total Current Year Injection	age												360,417 (
Total														360,417 ( 340

<sup>1</sup> Estimated return based on historic use method adopted by the Task Force on Unmeasured Return Flows on August 28, 1984, and revised as noted in the Reclamation letter to SNWA and CRCN dated December 5, 2007.

<sup>&</sup>lt;sup>2</sup> Colorado River water injected into groundwater storage is accounted for as a consumptive use in the year in which it is diverted from the Colorado River. It will not be accounted for as a consumptive use in the year in which it is withdrawn from storage, but because it originated as Colorado River water it will be accounted for as a return flow credit in the year in which it returns to the Colorado River.

## ARTICLE V(C): RECORDS FOR THE DISPOSITION OF WATER ORDERED BUT NOT DIVERTED

In accordance with Article V(C) of the Consolidated Decree, Tables 7 and 8 document records of releases of mainstream water pursuant to orders therefor but not diverted by the party ordering the same, and the quantity of such water delivered to Mexico in satisfaction of the 1944 Mexican Water Treaty or diverted by others in satisfaction of decreed rights.

In addition to the requirements of the Decree, the tabulations provided herewith also document quantities of such water passing to Mexico in excess of treaty requirements and quantities captured in storage.

Water ordered but not diverted is the difference between the approved daily order and the mean daily delivery on the day the diversion was made. Daily orders are provided to Reclamation in advance of the delivery date by the amount of time required for water to travel between the storage location and the user's point of diversion from the mainstream.

To the extent possible, water ordered but not diverted was delivered to other diverters in satisfaction of their water rights. Any remaining water ordered but not diverted was distributed between delivery to storage, delivery to Mexico in satisfaction of treaty requirements, and to Mexico in excess of treaty requirements.

The water users listed in this tabulation are major water users from whom Reclamation receives a daily water order and, with the exception of CAP and MWD, are those that divert their water downstream of Parker Dam. Currently, no daily orders are received from Nevada for diversion from the Colorado River therefore no Nevada tabulation is made. In addition, the storage capacity of Lake Mead is large enough in relation to Nevada's daily diversions from the reservoir that any water ordered but not diverted would be retained for future use and would not pass to Mexico in excess of treaty requirements.

The "Passing to Mexico in Excess of Treaty" values displayed in this section of the report reflect the sum of the daily amounts of water passing to Mexico in excess of the daily treaty amount, according to IBWC's schedule, resulting from water that had been ordered but not diverted. The "To Mexico in Excess of Treaty" values displayed in the Article V (D) section reflect all water under/over delivered to Mexico according to IBWC's schedule. The information provided in Article V(C) is unrelated to information provided in Article V(D) and comparisons between the tabulations should not be made.

Table 7. State of Arizona - Disposition of Water Ordered but not Diverted, Calendar Year 2015. (Values are in acre-feet.)

WATER USER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	TOTAL
Central Arizona Project - Diversion at Lake Havasu													
Ordered but not Diverted <sup>1</sup>	460	5,622	1,380	11,337	7,042	2,038	2,777	2,499	3,770	970	612	607	39,114
Delivered to Mexico in Satisfaction of Treaty		•	,	•	•	,	•	•	•				•
Diverted by Others													
Delivered to Storage <sup>2</sup>	460	5,622	1,380	11,337	7,042	2,038	2,777	2,499	3,770	970	612	607	39,114
Passing to Mexico in Excess of Treaty													
Colorado River Indian Reservation - Diversion at Headgate Rock Dam													
Ordered but not Diverted <sup>1</sup>	2,087	2,442	2,830	3,033	4,864	3,951	3,904	4,675	3,860	2,723	2,176	2,101	38,646
Delivered to Mexico in Satisfaction of Treaty	446	410	1,220	1,001	2,665	1,125	1,482	850	1,627	1,301	599	601	13,327
Diverted by Others	797	1,591	1,292	1,373	581	1,705	1,293	2,604	1,667	851	893	772	15,419
Delivered to Storage <sup>3</sup>	830	420	283	584	1,310	1,018	1,020	1,066	517	543	628	680	8,899
Passing to Mexico in Excess of Treaty	14	21	35	75	307	104	108	154	48	28	56	46	996
North Gila Valley I.D.D Diversion at Imperial Dam													
Ordered but not Diverted 1	786	259	578	218	930	480	630	459	876	665	1,033	946	7,860
Delivered to Mexico in Satisfaction of Treaty	455	91	317	131	486	175	188	113	250	387	282	258	3,133
Diverted by Others	154	126	98	48	153	166	171	245	252	121	426	405	2,365
Delivered to Storage <sup>3</sup>	156	39	143	36	219	122	262	72	358	154	315	266	2,141
Passing to Mexico in Excess of Treaty	21	4	20	3	71	18	10	28	16	3	11	17	222
Gila Monster Farms - Diversion at Imperial Dam													
Ordered but not Diverted <sup>1</sup>	379	255	375	231	241	128	224	226	394	655	731	356	4,195
Delivered to Mexico in Satisfaction of Treaty	144	77	161	39	153	61	68	62	111	282	198	108	1,464
Diverted by Others	153	167	164	116	26	32	90	102	198	197	347	151	1,743
Delivered to Storage <sup>3</sup>	70	8	44	76	48	32	52	50	77	168	175	88	889
Passing to Mexico in Excess of Treaty	12	3	6	0	12	2	14	10	8	8	12	9	96
Wellton-Mohawk I.D.D Diversion at Imperial Dam													
Ordered but not Diverted <sup>1</sup>	3,564	2,084	3,744	2,548	5,772	1,937	2,533	460	1,452	2,874	1,715	1,710	30,393
Delivered to Mexico in Satisfaction of Treaty	1,844	1,003	1,914	972	2,491	829	992	104	475	1,084	253	951	12,912
Diverted by Others	1,060	434	1,004	382	962	565	616	225	131	854	907	463	7,603
Delivered to Storage <sup>3</sup>	555	608	759	1,191	1,999	535	878	99	784	892	527	283	9,109
Passing to Mexico in Excess of Treaty	104	39	68	3	320	7	45	32	61	44	28	14	765
Yuma Irrigation District - Diversion at Imperial Dam													
Ordered but not Diverted <sup>1</sup>	463	215	544	300	425	405	84	652	23	92	310	439	3,952
Delivered to Mexico in Satisfaction of Treaty	262	59	276	120	282	237	21	226	1	52	80	253	1,869
Diverted by Others	124	87	117	118	28	81	33	308	1	24	152	110	1,183
Delivered to Storage <sup>3</sup>	65	66	131	60	59	82	12	93	18	15	73	62	735
Passing to Mexico in Excess of Treaty	11	3	20	2	57	5	19	24	2	0	3	14	160
Yuma Mesa I.D.D Diversion at Imperial Dam													
Ordered but not Diverted <sup>1</sup>	1,576	2,957	2,154	1,373	2,099	1,466	1,194	832	3,574	2,051	2,012	3,105	24,393
Delivered to Mexico in Satisfaction of Treaty	948	816	771	161	1,249	390	449	241	1,454	936	875	447	8,737
Diverted by Others	308	1,702	803	679	359	493	473	381	877	505	490	1,470	8,540
Delivered to Storage <sup>3</sup>	261	421	514	516	380	580	250	200	1,162	600	547	1,115	6,545
Passing to Mexico in Excess of Treaty	60	18	66	16	111	5	22	12	82	11	101	72	576

Table 7. State of Arizona - Disposition of Water Ordered but not Diverted, Calendar Year 2015. (Values are in acre-feet.)

WATER USER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	TOTAL
Unit "B" I.D.D Diversion at Imperial Dam													
Ordered but not Diverted <sup>1</sup>	320	678	599	321	494	415	297	337	1,328	853	413	866	6,921
Delivered to Mexico in Satisfaction of Treaty	126	162	217	95	329	117	102	133	475	389	128	127	2,400
Diverted by Others	170	371	200	161	74	174	72	116	419	214	158	507	2,636
Delivered to Storage <sup>3</sup>	22	137	165	59	76	121	119	69	392	244	116	201	1,721
Passing to Mexico in Excess of Treaty	1	8	18	5	16	5	4	19	43	7	10	31	167
Yuma County Water Users' Association - Diversion at Imperial Dam													
Ordered but not Diverted <sup>1</sup>	701	921	3,038	1,695	7,413	2,370	2,445	2,423	2,179	2,174	2,007	1,065	28,431
Delivered to Mexico in Satisfaction of Treaty	140	219	1,789	472	3,448	633	389	376	476	1,115	424	106	9,587
Diverted by Others	385	187	598	286	1,007	576	729	1,539	477	446	1,204	657	8,091
Delivered to Storage <sup>3</sup>	171	485	570	872	2,190	1,110	1,318	464	1,166	610	376	293	9,625
Passing to Mexico in Excess of Treaty	4	31	79	64	768	50	8	45	61	3	4	8	1,125
Arizona Totals													
Ordered but not Diverted <sup>1</sup>	10,336	15,433	15,242	21,056	29,280	13,190	14,088	12,563	17,456	13,057	11,009	11,195	183,905
Delivered to Mexico in Satisfaction of Treaty	4,365	2,837	6,665	2,991	11,103	3,567	3,691	2,105	4,869	5,546	2,839	2,851	53,429
Diverted by Others	3,151	4,665	4,276	3,163	3,190	3,792	3,477	5,520	4,022	3,212	4,577	4,535	47,580
Delivered to Storage <sup>2,3</sup>	2,591	7,806	3,990	14,731	13,322	5,638	6,687	4,612	8,243	4,195	3,367	3,595	78,777
Passing to Mexico in Excess of Treaty	227	127	312	168	1,662	196	230	324	321	104	225	211	4,107

<sup>&</sup>lt;sup>1</sup> Due to converting daily cfs values to monthly AF totals and rounding to the nearest whole number, the sum of the disposition of water volumes may not equal the Ordered but not Diverted volume.

 $<sup>^{2}</sup>$  Water not diverted by the Central Arizona Project remains in Lake Havasu.

<sup>&</sup>lt;sup>3</sup> Delivered to temporary storage in Senator Wash and Brock Reservoirs.

Table 8. State of California - Disposition of Water Ordered but not Diverted, Calendar Year 2015. (Values are in acre-feet.)

WATER USER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	TOTAL
The Metropolitan Water District of Southern California -	VAIT		W/AIX	ALI	III/S I	0014	UUL	700	021	- 001	1101	D_0	IOIAL
Diversion at Lake Havasu													
Ordered but not Diverted <sup>1</sup>	2,314	307	3,445	992	1,354	2,266	3,689	3,014	3,299	5,345	2,593	3,147	31,765
Delivered to Mexico in Satisfaction of Treaty	2,0	00.	0, 1.0	002	.,00.	_,	0,000	0,0	0,200	0,010	_,000	٥,	0.,.00
Diverted by Others													
Delivered to Storage <sup>2</sup>	2,314	307	3,445	992	1,354	2,266	3,689	3,014	3,299	5,345	2,593	3,147	31,765
Passing to Mexico in Excess of Treaty	,		,		,	,	,	,	,	,	,	•	,
Palo Verde Irrigation District - Diversion at Palo Verde Dam	200	0	F10	0.747	2 022	040	4 200	700	470	200	4 200	044	44 507
Ordered but not Diverted <sup>1</sup> Delivered to Mexico in Satisfaction of Treaty	266 118	0	516 142	2,717 878	2,023 1,221	813 78	1,200 891	793 84	476 171	389 228	1,390 598	944 247	11,527 4,656
Diverted by Others	92	0	369	1,109	217	471	158	533	132	31	396	234	3,742
Delivered to Storage <sup>3</sup>	52 52	0	4	712	451	214	124	139	149	123	314	454	2,736
Passing to Mexico in Excess of Treaty	4	0	1	17	135	52	27	37	24	7	83	8	395
,													- 230
Yuma Project Reservation Division - Diversion at Imperial Dam													
Ordered but not Diverted 1	5,775	2,254	1,054	626	3,918	1,425	1,932	912	4,096	2,933	5,841	5,467	36,233
Delivered to Mexico in Satisfaction of Treaty	2,595	792	555	277	2,023	695	1,071	362	1,348	1,577	1,654	1,622	14,571
Diverted by Others Delivered to Storage <sup>3</sup>	2,044 925	1,157 289	235 240	135 202	540	455	497 325	304 212	1,992 687	688 639	2,544 1,546	2,359 1,382	12,950 7,691
Passing to Mexico in Excess of Treaty	925 211	289 16	240	202 11	1,019 336	226 50	325	34	69	29	1,546 96	1,382	1,018
r assing to Mexico in Excess of Freaty	211	10	24	'''	330	30	39	34	09	29	90	103	1,010
Imperial Irrigation District - Diversion at Imperial Dam													
Ordered but not Diverted <sup>1</sup>	21,448	15,364	34,382	26,192	45,491	18,213	24,917	18,915	17,800	26,015	15,072	19,802	283,611
Delivered to Mexico in Satisfaction of Treaty	11,536	9,703	19,080	8,049	27,286	10,846	14,442	6,324	11,142	15,325	7,244	10,536	151,513
Diverted by Others	5,497	4,152	6,760	7,625	3,855	4,954	4,418	6,995	3,820	5,016	4,396	4,872	62,360
Delivered to Storage <sup>3</sup>	3,928	1,264	7,834	9,957	9,018	1,999	5,224	4,759	2,469	5,351	3,175	4,003	58,981
Passing to Mexico in Excess of Treaty	488	243	709	564	5,331	414	833	837	368	322	257	392	10,758
Coachella Valley Water District - Diversion at Imperial Dam													
Ordered but not Diverted <sup>1</sup>	3,121	1,016	2,365	3,028	4,178	1,995	4,189	1,165	4,900	4,552	1,395	2,839	34,743
Delivered to Mexico in Satisfaction of Treaty	1,268	696	1,108	1,509	2,520	1,203	1,292	204	1,266	2,783	558	553	14,960
Diverted by Others	1,093	196	878	977	412	478	1,393	568	2,653	833	572	1,204	11,257
Delivered to Storage <sup>3</sup>	688	110	321	444	821	242	1,399	355	888	897	223	1,019	7,409
Passing to Mexico in Excess of Treaty	71	12	58	98	425	72	105	38	93	40	42	63	1,117
California Totals													
Ordered but not Diverted <sup>1</sup>	32,924	18,937	41,763	33,555	56,964	24,715	35,928	24,800	30,569	39,234	26,291	32,199	397,879
Delivered to Mexico in Satisfaction of Treaty	15,517	11,191	20,885	10,713	33,050	12,822	17,696	6,974	13,927	19,913	10,054	12,958	185,700
Diverted by Others	8,726	5,505	8,242	9,846	5,024	6,358	6,466	8,400	8,597	6,568	7,908	8,669	90,309
Delivered to Storage <sup>2,3</sup>	7,907	1,970	11,844	12,306	12,663	4,947	10,762	8,480	7,491	12,355	7,851	10,006	108,582
Passing to Mexico in Excess of Treaty	774	271	792	690	6,227	588	1,004	946	554	398	478	566	13,288

<sup>&</sup>lt;sup>1</sup> Due to converting daily cfs values to monthly AF totals and rounding to the nearest whole number, the sum of the disposition of water volumes may not equal the Ordered but not Diverted volume.

Water not diverted by The Metropolitan Water District of Southern California remains in Lake Havasu.
 Delivered to temporary storage in Senator Wash and Brock Reservoirs.

## ARTICLE V(D): RECORDS OF DELIVERIES TO MEXICO IN SATISFACTION OF 1944 TREATY REQUIREMENTS AND WATER PASSING TO MEXICO IN EXCESS OF TREATY REQUIREMENTS

In accordance with Article V(D) of the Consolidated Decree, Table 9 documents the records of deliveries to Mexico of water in satisfaction of the obligations of Part III of the Treaty of February 3, 1944 and water passing to Mexico in excess of treaty requirements. The tabulations, based upon records furnished by the U.S. Section of the IBWC, show the quantities of water delivered to Mexico at the Northerly International Boundary, the Southerly International Boundary, the Limitrophe, and emergency deliveries to Tijuana (as applicable), pursuant to Articles 10 and 15 of the 1944 Treaty and related Minutes of the IBWC; and the quantities of water passing to Mexico in excess of treaty requirements. Minutes incorporated into the tabulations include:

1) Minute No. 242 – Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River, signed August 30, 1973.

- 2) Minute No. 318 Adjustment of Delivery Schedules for Water Allotted to Mexico for the Years 2010 Through 2013 as a Result of Infrastructure Damage in Irrigation District 014, Rio Colorado, Caused by the April 2010 Earthquake in the Mexicali Valley, Baja California, signed December 17, 2010.
- 3) Minute No. 319 Interim International Cooperative Measures in the Colorado River Basin Through 2017 and Extension of Minute 318 Cooperative Measures to Address the Continued Effects of the April 2010 Earthquake in the Mexicali Valley, Baja California, signed November 20, 2012.

Table 9. Deliveries to Mexico in Satisfaction of Part III of the 1944 Treaty, and Water Passing to Mexico in Excess of Treaty Requirements, Calendar Year 2015. (Values are in acre-feet.)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	TOTAL
Colorado River at the Northerly International Boundary <sup>1</sup>	133,884	159,976	206,479	196,897	100,354	94,729	94,960	80,545	76,433	48,380	79,908	90,932	1,363,477
Deliveries to Mexico in Satisfaction of Treaty Requirements													
Delivery at the Limitrophe <sup>2</sup>	225	243	343	149	212	98	177	55	367	576	332	180	2,957
Delivery at Southerly International Boundary	11,779	11,998	11,859	13,013	12,080	13,796	12,207	12,080	12,885	10,081	12,704	13,579	148,061
Diversion Channel Discharge <sup>3</sup>		0	0	2	3	17	11	77	224				334
Delivery to Mexico at the Northerly International Boundary 4	133,480	159,370	206,024	195,921	91,932	94,309	94,004	80,072	75,831	47,813	79,423	90,469	1,348,648
Total Deliveries to Mexico in Satisfaction of Treaty Requirements	145,484	171,611	218,226	209,085	104,227	108,220	106,399	92,284	89,307	58,470	92,459	104,228	1,500,000
Mexico's Deferred Delivery <sup>5</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0
Total to Mexico in Satisfaction of Treaty Requirements	145,484	171,611	218,226	209,085	104,227	108,220	106,399	92,284	89,307	58,470	92,459	104,228	1,500,000
Delivery of Water Deferred Pursuant to Section III.1 of IBWC Minute No. 319	0	0	0	0	0	0	0	0	0	0	0	0	0
To Mexico in Excess of Treaty <sup>6</sup>	404	606	455	976	8,422	420	956	473	602	567	485	463	14,829
Accountable Deliveries to Mexico <sup>7</sup>	145,888	172,217	218,681	210,061	112,649	108,640	107,355	92,757	89,909	59,037	92,944	104,691	1,514,829
Water Bypassed Pursuant to IBWC Minute No. 242	13,579	12,778	14,150	12,374	14,039	13,805	11,182	11,092	10,602	16,650	11,529	10,211	151,991
Water Deferred Pursuant to Section III.1 of IBWC Minute No. 319 (Deferred Delivery) <sup>5</sup>													
EOY 2014 Cumulative Deferred Delivery Balance													237,658
Current Year Deferred Delivery													0
Delivery of Water Deferred Pursuant to Section III.1 of IBWC Minute No. 319													0
Evaporation <sup>8</sup>													7,130
EOY 2015 Cumulative Deferred Delivery Balance Available for Future Delivery <sup>9</sup>													230,528

Note: Annual totals may not sum due to rounding and conversion from TCM to AF.

<sup>&</sup>lt;sup>1</sup> Flow in the river at the NIB as reported by IBWC as delivery to Mexico.

<sup>&</sup>lt;sup>2</sup> Wasteway deliveries to the river limitrophe via the Cooper, 11 mile, and 21 mile lateral wasteways in satisfaction of the 1944 Treaty requirements.

<sup>&</sup>lt;sup>3</sup> The Diversion Channel delivers water from the SIB confluence structure to the river or to the Bypass Drain. Consistent with a 2001 Memorandum of Understanding between Reclamation and the U.S. Section of the IBWC, during the months of October through January water is discharged to the Bypass Drain. During the months of February through September water is discharged to the Colorado River and is charged to the Treaty.

<sup>&</sup>lt;sup>4</sup> That portion of the flows at NIB necessary to meet the 1.5 MAF treaty obligation.

<sup>&</sup>lt;sup>5</sup> Water deferred pursuant to Section III.1 of IBWC Minute No. 319.

<sup>&</sup>lt;sup>6</sup> Water passing to Mexico in excess of Mexico's daily schedule. Calculated as the sum of daily differences between actual flows to Mexico and Mexico's total schedule.

<sup>&</sup>lt;sup>7</sup> Mexico's total water delivery. This value includes deliveries made in satisfaction of Treaty requirements in accordance with Mexico's scheduled diversions (including delivery of water deferred pursuant to Section III.1 of IBWC Minute No. 319 when such deliveries occur) and water passing to Mexico in excess of Mexico's daily schedule. It does not include water bypassed pursuant to IBWC Minute No. 242.

<sup>&</sup>lt;sup>8</sup> In accordance with IBWC Minute No. 319, a 3 percent reduction for evaporation shall be applied annually on December 31 to water deferred by Mexico pursuant to Section III.1 or any portion thereof has not been delivered, beginning in the year of creation.

<sup>&</sup>lt;sup>9</sup> The cumulative volume of Mexico's Deferred Delivery includes water deferred during the reporting year and the prior year EOY balance of Deferred Delivery, less deliveries made during the reporting year and the annual evaporation assessment.

## ARTICLE V(E): RECORDS OF DIVERSIONS AND CONSUMPTIVE USE OF WATER FROM THE MAINSTREAM OF THE GILA AND SAN FRANCISCO RIVERS FOR THE BENEFIT OF THE GILA NATIONAL FOREST

Table 10. Diversions and Consumptive Use for the Benefit of the Gila National Forest, Calendar Year 2015. (Values are in acre-feet.)

WATER SOURCE		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Gila River	Diversion	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	0	0	0	0	0	0	0	0	0	0	0	0	0
San Francisco River	Diversion	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consumptive Use	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	Total Diversion	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Consumptive Use	0	0	0	0	0	0	0	0	0	0	0	0	0

<sup>&</sup>lt;sup>1</sup>These data are provided annually by the New Mexico Interstate Stream Commission.

## INFORMATION PROVIDED IN ADDITION TO THE REPORTING REQUIREMENTS OF THE CONSOLIDATED DECREE

The information contained in the following sections of this report is supplemental to the records required by Article V of the Consolidated Decree of the United States Supreme Court in Arizona v. California, 547 U.S. 150 (2006). This information provides a more extensive record of activities relating to federal management of the Colorado River. In concise tabulations specific to various agreements, policies, rules, or Records of Decision, this information is intended to help the reader correlate the records found in the Article V portion of this report with the various conservation, transfer, and exchange agreements. The final section contains a list of documents significant to the actions taken by Reclamation, the Lower Division States, and the water user agencies for the calendar year documented in this report.

### SUMMARY OF WATER AVAILABILITY AND USE BY STATE

The Secretary of the Interior (Secretary) makes Colorado River water available to the Lower Division States in accordance with Article II of the Consolidated Decree.

Under Article II, the Secretary apportions water to the states under shortage, normal, or surplus conditions, and, in accordance with Article II(B)6, may release to a state water which was apportioned to but unused by another state.

The amount of Colorado River water available for use in a state is impacted by various agreements and policies. Examples of these agreements and policies include storage and interstate release agreements, the Colorado River Water Delivery Agreement (CRWDA), the Inadvertent Overrun and Payback Policy (IOPP), and the Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead (2007 Interim Guidelines), specifically, Intentionally Created Surplus (ICS).

Table 11 documents the amount of Colorado River water made available to each Lower Division State under Article II of the Consolidated Decree, water released pursuant to Article II(B)(6) of the Consolidated Decree, paybacks made by users within the state in accordance with IOPP, creation or delivery of ICS, and the total consumptive use within a state.

The table demonstrates whether the consumptive use results in an underrun or overrun of the amount of Colorado River water available to each Lower Division State for the calendar year covered by this report.

Table 11. Apportionments, Article II(B)(6) Releases, Paybacks, and Total Consumptive Use by State, Calendar Year 2015. (Values are in acre-feet.)

STATE	ADJUSTMENTS	ACTUAL USE
Arizona	Basic Apportionment <sup>1</sup>	2,800,000
	NV II(B)(6) Released to AZ for Storage for NV <sup>2</sup>	0
	CAGRD/YMIDD Pilot Fallowing Program Conservation <sup>3</sup>	(7,180)
	System Conservation Water - Left in Lake Mead <sup>4</sup>	(10,080)
	IOPP Paybacks <sup>5</sup>	(165)
	Total Available Colorado River Water <sup>6</sup>	2,782,575
	Total Consumptive Use <sup>7</sup>	2,604,732
	State Underrun or (Overrun)	177,843
	Unused AZ Apportionment Left in Lake Mead <sup>8</sup>	(177,843)
	Net State Underrun or (Overrun)	0
California	Basic Apportionment <sup>1</sup>	4,400,000
	NV II(B)(6) Released to CA for Storage for NV <sup>2</sup>	150,000
	ICS Delivery (MWD)	70,756
	ICS Creation (IID)	0
	Total Available Colorado River Water <sup>6</sup>	4,620,756
	Total Consumptive Use 7	4,620,756
	Net State Underrun or (Overrun)	0
Nevada	Basic Apportionment <sup>1</sup>	300,000
	ICS Delivery (SNWA)	75,000
	Total Available Colorado River Water <sup>6</sup>	375,000
	Total Consumptive Use <sup>7</sup>	222,729
	State Underrun or (Overrun)	152,271
	NV II(B)(6) Released for Storage by CA <sup>2</sup>	(150,000)
	Unused NV Apportionment Left in Lake Mead	(2,271)
	Net State Underrun or (Overrun)	0

<sup>&</sup>lt;sup>1</sup> The state basic apportionment as described in Article II(B)(1) of the Consolidated Decree.

<sup>&</sup>lt;sup>2</sup> Nevada unused apportionment made available to Arizona and/or California by the Secretary under Article II(B)(6) of the Consolidated Decree for storage in Arizona and/or California under the appropriate SIRA.

<sup>&</sup>lt;sup>3</sup> In 2013, CAWCD and YMIDD entered into a Pilot Fallowing Program Agreement in which CAWCD provides funding to YMIDD to fallow a portion of its land. In 2015, 7,180 AF of Colorado River water conserved by the CAGRD/YMIDD fallowing program was intentionally not diverted by CAWCD and left in Lake Mead to benefit system storage.

<sup>&</sup>lt;sup>4</sup> On September 15, 2015, the Bureau of Reclamation and the Tohono O'Odham Nation (Nation) entered into a System Conservation Implementation Agreement under the Pilot System Conservation Program in which the Nation agreed to reduce its delivery of Central Arizona Project water entitlement by 10,080 AF to create System Conservation Water. In accordance with Reclamation Letter Agreement No. 15-XX-30-W0585, CAWCD agreed to not request delivery of this System Conservation Water and allowed it to remain in Lake Mead to benefit system storage.

<sup>&</sup>lt;sup>5</sup> The reduction in the amount of water available to the state due to repayment obligations fullfilled under the IOPP.

<sup>&</sup>lt;sup>6</sup> The total amount of Colorado River water available for use by the state during the reporting year.

<sup>&</sup>lt;sup>7</sup> The total consumptive use of Colorado River water within the state as tabulated in the Article V(B) section of this report.

<sup>&</sup>lt;sup>8</sup> Colorado River water apportioned to Arizona, but not diverted in 2015. By letter dated March 2, 2015, CAWCD notified Reclamation that it anticipated creating up to 96,000 AF of ICS in 2015. In accordance with Section XI.D.1 of the 2007 Interim Guidelines, creation of ICS is predicated upon the execution of a Forbearance Agreement and subsequent Delivery Agreement. As of the date of this report, the execution of these agreements has not been completed; any ICS creation by CAWCD, as verified by Reclamation, will be reflected in a future Colorado River Accounting and Water Use Report.

# INTERSTATE WATER BANKING WITHIN THE STATES OF ARIZONA, CALIFORNIA, AND NEVADA

On November 1, 1999, the Secretary of the Interior adopted Federal regulations, codified at 43 CFR Part 414, establishing a procedural framework for carrying out an interstate water banking program. The rule provided for authorized parties to enter into agreements whereby Colorado River water may be stored off-stream in one state for future benefit of consuming entities in another state.

The primary mechanism through which these transactions may occur is a Storage and Interstate Release Agreement (SIRA), which permits authorized entities in the Lower Division States to store Colorado River water off-stream, develop intentionally created unused apportionment (ICUA) in a future year, and make the ICUA available to the Secretary for release for use in another Lower Division State. These SIRAs provide structure and guidance, in accordance with Article II(B)(6) of the Consolidated Decree, for the actions the Secretary will take in releasing Colorado River water to a specific entity in order to implement the interstate contractual distribution of water under the interstate water banking program.

Two SIRAs have been implemented under 43 CFR Part 414. The first SIRA was entered into on December 18, 2002, among Reclamation, on behalf of the Secretary, the Arizona Water Banking Authority (AWBA), the Southern Nevada Water Authority (SNWA), and the Colorado River Commission of Nevada (CRCN). This SIRA provides for the storage, by AWBA, of either the State of Arizona's basic or surplus apportionment or the State of Nevada's unused basic or surplus apportionment for the benefit of SNWA.

In 2001, AWBA, SNWA, and CRCN executed an Agreement for Interstate Water Banking, amended January 1, 2005, April 1, 2009, and May 20, 2013, specifying the interstate banking relationship among those parties. This agreement establishes the terms and conditions for the off-stream storage of Colorado River water in Arizona and the establishment of Long-Term Storage Credits (LTSC) for the benefit of SNWA.

Under the AWBA/SNWA/CRCN interstate banking agreement, Colorado River water diverted and banked in Arizona is accounted as consumptively used by Arizona in the year it is diverted and, as a result, LTSC's are created for SNWA. When LTSC's are recovered, SNWA will divert Colorado River water in exchange for the Central Arizona Water Conservation District's (CAWCD) use of the LTSC's pursuant to the SIRA. The Secretary will release ICUA created by AWBA, via CAWCD's forbearance to SNWA, in that same year pursuant to Article II(B)(6) of the Consolidated Decree. ICUA used by SNWA is in addition to Nevada's basic apportionment and is accounted as consumptive use of Colorado River water in Nevada for that year.

The second SIRA was entered into on October 27, 2004, among Reclamation, on behalf of the Secretary, the Metropolitan Water District of Southern California (MWD), SNWA, and CRCN. This SIRA provides for the storage, by MWD, of the State of Nevada's unused basic or surplus apportionment for the benefit of SNWA.

In 2004, MWD, SNWA, and CRCN, executed an Operational Agreement, amended August 2009, October 2012, and October 2015, specifying the interstate banking relationship among those parties, and providing the terms and conditions under which MWD will store Nevada unused basic apportionment for the benefit of SNWA. When SNWA requests delivery of this water, MWD will develop ICUA by reducing its diversion of Colorado River water. The ICUA developed by MWD through its reduced diversion of Colorado River water will be released by the Secretary for use by SNWA.

Table 12 documents the Accumulated Long Term Storage Credits (ALTSC) verified by AWBA and MWD, provisional LTSC accrued during the past year, LTSC's recovered during the past year, and ALTSC held for an entity with a SIRA.

Table 12. Colorado River Water Stored in one State Under 43 CFR Part 414 for the Benefit of Specific Entities in Another State (Interstate Water Banking), Calendar Year 2015. (Values are in acre-feet.)

	BOY Balance	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	TOTALS
NEVADA														
Water diverted and stored in AZ by AWBA for the	he benefit o	f SNWA.												
Verified 2014 EOY ALTSC <sup>1</sup>	601,041													
Accrued LTSC in 2015 <sup>2</sup>		0	0	0	0	0	0	0	0	0	0	0	0	0
Verified LTSC in 2015		0	0	0	0	0	0	0	0	0	0	0	0	0
ICUA Developed in 2015 3	_	0	0	0	0	0	0	0	0	0	0	0	0	0
Total ALTSC <sup>4</sup>	=	601,041	601,041	601,041	601,041	601,041	601,041	601,041	601,041	601,041	601,041	601,041	601,041	601,041
Water diverted and stored in CA by MWD for the	e benefit of	SNWA.												
Verified 2014 EOY ALTSC 1,5	205,225													
Diverted in 2015 <sup>5</sup>		0	0	0	0	0	0	0	0	0	0	66,955	83,045	150,000
Verified LTSC in 2015 <sup>5</sup>		0	0	0	0	0	0	0	0	0	0	55,796	69,204	125,000
ICUA Developed in 2015 3, 5	_	0	0	0	0	0	0	0	0	0	0	0	0	0
Total ALTSC <sup>5</sup>	=	205,225	205,225	205,225	205,225	205,225	205,225	205,225	205,225	205,225	205,225	261,021	330,225	330,225
TOTAL														
Water stored for the benefit of SNWA during the calend	lar year	0	0	0	0	0	0	0	0	0	0	55,796	69,204	125,000
Cumulative Balance of Water Stored for SNWA within A	$^6$	806,266	806,266	806,266	806,266	806,266	806,266	806,266	806,266	806,266	806,266	862,062	931,266	931,266

<sup>&</sup>lt;sup>1</sup> ALTSCs are LTSCs verified by the banking entity before the beginning of the reporting year and available for recovery by a specific entity with a valid SIRA. The amount of ICUA developed cannot exceed verified LTSCs.

<sup>&</sup>lt;sup>2</sup> Provisional LTSCs accrued during the reporting year for the benefit of a specific consuming entity in Nevada with a valid SIRA. Provisional LTSCs represent the amount of water diverted from the river and transported to the storage facility. Provisional LTSCs that have not been verified by AWBA or MWD are not eligible for certification and recovery. Accruals of LTSCs in Arizona for the benefit of consuming entities in Nevada and California are limited to 200,000 AF annually.

<sup>&</sup>lt;sup>3</sup> ICUA developed by AWBA or MWD during the reporting year. AWBA or MWD have certified this amount to be available and the Secretary has released it to a specific entity with a valid SIRA. The ALTSCs are certified by AWBA or MWD when ICUA is requested, and prior to its release by the Secretary. Total recovery of ALTSCs from AWBA cannot exceed 100,000 AF annually, due to a limitation defined under Arizona state law. When water is released from storage, Arizona or MWD will be required to reduce its consumptive use through the development of ICUA in an amount equal to Nevada's requested release. Nevada will be allowed to utilize the unused apportionment in an amount equal to the ICUA made available.

<sup>&</sup>lt;sup>4</sup> ALTSCs are the cumulative monthly sum of verified or estimated LTSCs.

<sup>&</sup>lt;sup>5</sup> In 2004, MWD, SNWA, and the Secretary entered into a SIRA to allow MWD to divert and store water for the benefit of SNWA. When storage occurs, it must be Nevada unused apportionment, which will require Nevada to reduce its consumptive use by an amount equal to the total storage. When water is released from storage, MWD will be required to reduce its consumptive use through the development of ICUA in an amount equal to Nevada's requested release and Nevada will be allowed to utilize the unused apportionment in an amount equal to the ICUA made available by MWD. In October 2015, MWD, CRCN, and SNWA executed the Third Amended Operational Agreement (Agreement) in which the parties agreed that, in 2015, MWD would store 150,000 AF for the benefit of SNWA. In accordance with Section 4.2 of the Agreement, water stored by MWD in 2015 would be charged with a loss of 25,000 AF.

<sup>&</sup>lt;sup>6</sup> This cumulative balance includes both the BOY ALTSC balance as verified by AWBA and MWD and the verified LTSCs placed into storage during the reporting year.

# INADVERTENT OVERRUNS AND PAYBACKS WITHIN THE STATES OF ARIZONA, CALIFORNIA, AND NEVADA

On October 10, 2003, the Secretary of the Interior executed the Colorado River Water Delivery Agreement authorizing the Inadvertent Overrun and Payback Policy (IOPP). The policy is set forth in the *Record of Decision, Colorado River Water Delivery Agreement, Implementation Agreement, Inadvertent Overrun and Payback Policy, and Related Federal Actions, Final Environmental Impact Statement, published in the Federal Register at 69 Fed. Reg. 12202 (March 15, 2004). Effective January 1, 2004, the IOPP, which applies only to Colorado River water users in the Lower Division States, defines inadvertent overruns, establishes procedures to account for inadvertent overruns, and sets forth the requirements for payback of inadvertent overruns to the Colorado River system.* 

For various reasons, a user may inadvertently divert, pump or receive Colorado River water in an amount that exceeds that to which the user is entitled for that year pursuant to the user's water delivery contract, decreed water right, or Secretarial reservation (inadvertent overrun).

In accordance with the IOPP, paybacks are required to commence in the calendar year that immediately follows the release date of the final Water Accounting Report that reports the overrun. Section 2.6 of the IOPP sets forth the number of years within which an overrun must be paid back and the minimum payback required for each year. Overruns are not allowed in a year for which the Secretary has declared a Shortage condition.

The tabulations in Tables 13 through 15 document information associated with inadvertent overruns and paybacks, as applicable, for each individual water user, including:

- 1) The beginning-of-year overrun account balance.
- 2) The amount of overrun incurred in the reporting year.
- 3) The amount of validated paybacks made to the Colorado River system in the reporting year.
- 4) The end-of-year overrun balance.

Table 13. State of Arizona - Overruns, Paybacks, and Overrun Account Balances, Calendar Year 2015 (Values are in acre-feet.)

ENTITLEMENT
11,518
1,110

<sup>&</sup>lt;sup>1</sup> Pursuant to 43 CFR Part 417 (Part 417), the water user's approved diversion or consumptive use amount for the reporting year. For water users not subject to Part 417, this amount is equivalent to the water user's entitlement, less any payback obligations for the reporting year.

<sup>&</sup>lt;sup>2</sup> The water user's actual diversion or consumptive use as tabulated in the Arizona Article V(B) section (Tables 4a and 4b) of this report.

<sup>&</sup>lt;sup>3</sup> For accounting purposes the Cocopah Indian Reservation entitlement amount is calculated by combining the Cocopah Tribe's (Tribe) entitlement for use on Trust lands (10,847 AF) and the Tribe's estimated entitlement for use on Fee lands in PPR No. 7 (671 AF). The Tribe's entitlement for use on Fee lands is an estimated amount based on an acreage-prorated share of the total entitlement under PPR No.7. The amount of this entitlement is currently under review.

Table 14. State of California - Overruns, Paybacks, and Overrun Account Balances, Calendar Year 2015. (Values are in acre-feet.)

WATER USER	DETAILS	ANNUA DIVERSION	L TOTALS CONSUMPTIVE USE	APPROVAL	ENTITLEMENT
	No overruns or paybacks occurred within the State	e of California in the	reporting year.		
			Top or mig your		

Table 15. State of Nevada - Overruns, Paybacks, and Overrun Account Balances, Calendar Year 2015. (Values are in acre-feet.)

			AL TOTALS		
WATER USER	DETAILS	DIVERSION	CONSUMPTIVE USE	APPROVAL	ENTITLEMENT
	No overruns or paybacks occurred within the S	ate of Nevada in the	reporting year.		
	, ,		, 3,		

## LOWER COLORADO WATER SUPPLY PROJECT

The Lower Colorado Water Supply Act (Act), Public Law 99-655, Nov. 14, 1986, authorized the Secretary of the Interior (Secretary) to construct, operate, and maintain the Lower Colorado Water Supply Project (LCWSP). Pursuant to the Act, the Secretary is authorized to enter into exchange contracts and take such actions as the Secretary deems appropriate to facilitate a water exchange between non-Federal interests for the care, operation, and maintenance of all or any part of the project works, subject to such rules and regulations as the Secretary may prescribe.

Any contracts executed by the Secretary to fulfill the requirements of subsections (a)(2) and (a)(3) of the Act must be with persons, or Federal or non-Federal governmental entities whose lands or interests in lands are located adjacent to the Colorado River in the State of California who do not hold rights to Colorado River water or whose rights are insufficient to meet their present or anticipated future needs, as determined by the Secretary. Such entities shall include domestic, municipal, industrial, and recreational water users along the Colorado River in the State of California. Water for agricultural use is not authorized under the Act.

The Act authorizes construction of wells with a total annual capacity of 10,000 acre-feet. Stage I of the LCWSP has been completed and consists of two wells located south of the All-American Canal (AAC) in Imperial County having a total design capacity of 5,000 acre-feet. The wells, which became operational as of August 1, 2003, pump ground water and discharge it into the AAC for use by the Imperial Irrigation District (IID). IID then forbears the use of an equal amount of Colorado River water.

In September 1992, Reclamation entered into a contract to supply LCWSP water to the City of Needles (Needles) in annual amounts

up to 3,500 acre-feet of the initial 5,000 acre-feet available. The contract with Needles establishes a framework for Needles to enter into sub-contracts for delivery of LCWSP water to non-Federal water users in San Bernardino, Riverside, and Imperial Counties. The Colorado River Board of California (CRBC) recommends whether a non-Federal applicant should be offered a subcontract for a LCWSP water supply and notifies Reclamation. Reclamation reviews the information submitted by CRBC and refers the approved applicants to the City which then offers subcontracts.

In September 1998, the Bureau of Land Management (BLM) was allocated 1,150 acre feet of Stage I capacity for consumptive use on BLM administered lands in California located adjacent to the Colorado River. In December 2004, a Reclamation determination reserved an additional 350 acre-feet of Stage I capacity of the LCWSP for use by Reclamation facilities in California on land adjacent to the Colorado River. With the determination, the estimated 5,000 acre-feet per year of Stage I capacity was completely allocated.

The Act, as amended in 2005, authorizes the Secretary to contract for the use of LCWSP water under terms that the Secretary determines will benefit the interest of LCWSP users along the Colorado River. On March 26, 2007, Reclamation entered into a contract with the Needles and the Metropolitan Water District of Southern California (MWD), allowing Stage I of the LCWSP to be pumped at capacity, allowing MWD to receive as much unused water as available without jeopardizing the LCWSP. MWD is depositing certain monies in a Water Quality Maintenance Trust Fund to provide for the long-term viability of the LCWSP or its replacement.

Table 16. Summary of Uses Offset by Pumpage from the LCWSP, Calendar Year 2015. (Values are in acre-feet.)

		TOTALS
LCWSP Wellfield Pumpage <sup>1</sup>		7,219
Federal LCWSP Contractors <sup>2</sup>		
BLM	Consumptive Use	227
Reclamation - Parker Dam and Government Camp	Consumptive Use	1
	<b>Total Federal Contractors' Consumptive Use</b>	228
Non-Federal LCWSP Contractors <sup>3</sup>		
City of Needles	Consumptive Use	0
Needles' Subcontractors		
Southern California Gas Company	Consumptive Use	65
Pacific Gas & Electric Company	Consumptive Use	2
Havasu Water Company of California	Consumptive Use	19
Vista del Lago Resort	Consumptive Use	5
Needles' Other Subcontractors	Consumptive Use	178
	Needles' and Subcontractors' Consumptive Use	269
LCWSP Water Available to MWD <sup>4</sup>		6,722
	Total Non-Federal Contractors' Consumptive Use	6,991

<sup>&</sup>lt;sup>1</sup> Non-Colorado River water pumped from the LCWSP wellfield and delivered to IID for its use via the AAC. IID forbears the consumptive use of this amount from the Colorado River to make water available for exchange to the LCWSP beneficiaries.

<sup>&</sup>lt;sup>2</sup> Total LCWSP Federal contractors' consumptive use. Colorado River water used was exchanged for LCWSP water.

<sup>&</sup>lt;sup>3</sup> Total LCWSP Non-Federal consumptive use by the City of Needles and its subcontractors. Colorado River water used was exchanged for LCWSP water.

<sup>&</sup>lt;sup>4</sup> Total amount of water pumped from the wellfield less consumptive use of LCWSP water by Federal and Non-Federal LCWSP contractors.

# **CONSERVATION, TRANSFERS, AND EXCHANGES**

Colorado River water apportioned to the Lower Division States has been further apportioned among the states of Arizona, California, and Nevada and is generally committed to specific persons or entities on a permanent basis. Increasing water demands within the Lower Division States must be met through a combination of conservation, transfers, exchanges, or new water sources which augment the limited supply of Colorado River water.

On October 10, 2003, the Secretary of the Interior entered into the Colorado River Water Delivery Agreement (CRWDA) with Imperial Irrigation District, Coachella Valley Water District, the Metropolitan Water District of Southern California, and the San Diego County Water Authority to resolve longstanding disputes regarding the priority, use, and transfer of Colorado River water within California. The CRWDA recognizes a variety of water transfers, exchanges, and conservation programs which alter the delivery of certain Colorado River water for up to 75 years.

The California agencies entered into the Quantification Settlement Agreement, including a series of supplemental agreements, which collectively implement many provisions of the CRWDA through water transfers, water exchanges, and water conservation measures. Data as a result of the implementation of these agreements are documented in this section.

Table 17 entitled "Comparison of Net California Agricultural Use, Calendar Year 2015" demonstrates the impact of conservation and transfers on agricultural water use in California in the reporting year and compares the California agricultural use to the applicable Benchmark or Annual Target.

Tables 18 through 20 entitled "State of (State) Transfers, Exchanges and Water Made Available by Extraordinary Conservation, Calendar Year 2015" tabulate these transactions reported within Arizona, California, and Nevada.

For California, the tabulation provides a comparison between California agricultural use and the Benchmarks and Targets identified in the 2007 Interim Guidelines, and documents, by agreement, conservation outside of the CRWDA or in amounts that differ from those displayed in Exhibit B of the CRWDA.

For Arizona and Nevada the tabulation includes System Conservation Water created in 2015 under the Pilot System Conservation Program (PSCP). Under the PSCP, System Conservation Water, conserved through the voluntary implementation of extraordinary conservation pilot projects, remained in Lake Mead to benefit system storage.

Table 21 entitled "Bureau of Reclamation – Water Made Available by Conservation, Calendar Year 2015" documents water made available through conservation by Reclamation. This includes:

- 1) Groundwater introduced to the system by pumping certain wells in the Yuma area that discharges to the Colorado River via the Yuma Mesa Conduit.
- 2) Water stored in Warren H. Brock Reservoir.
- 3) Water discharged to the Colorado River as a result of the operation of the Yuma Desalting Plant.

Table 22 entitled "Exhibit B to the Colorado River Water Delivery Agreement" is reproduced from the CRWDA for convenient reference.

Table 17. Comparison of Net California Agricultural Use, Calendar Year 2015<sup>1</sup>. (Values are in acre-feet.)

California Agricultural Entity	Consumptive Uses
Palo Verde Irrigation District	399,031
Yuma Project Reservation Division	47,621
Yuma Island Pumpers <sup>2</sup>	3,082
Priorities 1, 2, 3b	449,734
CVWD	342,068
	2,480,933
Total California Agricultural Use	3,272,735
MWD Reduction for Priority 1, 2, and 3b use <sup>3</sup>	(29,734)
Overruns (by ag. entities)	0
Paybacks (by ag. entities)	0
MWD-CVWD Exchange	0
ICS Creation (by ag. entities)	0
ICS Delivery (by ag. entities)	0
IID and CVWD reductions for PPRs	14,500
Use by California Agriculture+MWD Adjustment+Agricultural paybacks+IID/CVWD covered PPRs	3,257,501
Annual Agricultural Benchmark or Target Comparison	
2015 Annual Target <sup>4</sup>	3,448,000
Use by California Agriculture+MWD Adjustment+Agricultural paybacks+IID/CVWD covered PPRs	3,257,501
Total Target Overrun or (Underrun)	(190,499)
Priority 1, 2, and 3b use below/above 420,000 AF	
Palo Verde Irrigation District	399,031
Yuma Project Reservation Division	47,621
Yuma Island Pumpers <sup>2</sup>	3,082
Total Priority 1, 2, 3b Use	449,734
MWD reduction for Priority 1, 2, and 3b water use <sup>5</sup>	(29,734)
Priority 1, 2, and 3b water delivered to MWD <sup>6</sup>	0

<sup>&</sup>lt;sup>1</sup> Sections XI.A., B., E., F., and G., of the 2007 Record of Decision, Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead contain the adopted Interim Guidelines. Section XI.G.5 of the Interim Guidelines contains benchmarks for aggregate California agricultural water use during each third year from 2003 through 2012. Exhibit B to the CRWDA, Column 22 references these Interim Guidelines benchmarks, and Column 23 references annual targets for aggregate agricultural water use for the years between the benchmarks and through 2016. Footnotes 2 and 12 of Exhibit B define annual targets and benchmark year aggregate agricultural use totals as consumptive use of Priorities 1 through 3 plus 14,500 AF of PPR use, minus any MWD adjustment for Priority 1 through 3 use above 420,000 AF.

<sup>&</sup>lt;sup>2</sup> Incorporation of Yuma Island Pumpers' use within Priority 2 does not represent either a final approval of this use by Reclamation or a final determination of the appropriate Consolidated Decree accounting for this use; nor is it an admission by any Colorado River contractor as to the legality of this use or diversion of Colorado River water.

<sup>&</sup>lt;sup>3</sup> MWD's reductions for Priorities 1, 2, and 3b count toward meeting the ISG annual target.

<sup>&</sup>lt;sup>4</sup> See Exhibit B of the CRWDA (Column 23).

<sup>&</sup>lt;sup>5</sup> Per Section 4.d of the CRWDA, MWD use is reduced by the sum of Priority 1, 2, and 3b use greater than 420,000 AF.

<sup>&</sup>lt;sup>6</sup> Per Section 4.d of the CRWDA, the sum of Priority 1, 2, and 3b use that is less than 420,000 AF is delivered to MWD.

### Table 18. State of Arizona - Transfers, Exchanges, and Water Made Available by Extraordinary Conservation, Calendar Year 2015. (Values are in acre-feet.)

PROGRAM OR PARTICIPATING AGENCIES	TOTAL
CAWCD/YMIDD Pilot Fallowing Program <sup>1</sup>	7,180
Pilot System Conservation Program - Tohono O'Odham Nation <sup>2</sup>	10,080

<sup>&</sup>lt;sup>1</sup> In 2013, CAWCD and YMIDD entered into a Pilot Fallowing Program Agreement in which CAWCD will provide funding to YMIDD to fallow a portion of its land. In 2015, 7,180 AF of Colorado River water conserved by the CAGRD/YMIDD fallowing program was intentionally not diverted by CAWCD and left in Lake Mead to benefit system storage.

<sup>&</sup>lt;sup>2</sup> In 2015, the Bureau of Reclamation and the Tohono O'Odham Nation (Nation) entered into a System Conservation Implementation Agreement under the Pilot System Conservation Program in which the Nation agreed to reduce its delivery of Central Arizona Project water entitlement by 10,080 AF to create System Conservation Water. In accordance with Reclamation Letter Agreement No. 15-XX-30-W0585, CAWCD agreed to not request delivery of this System Conservation Water and allowed it to remain in Lake Mead to benefit system storage.

Table 19. State of California - Transfers, Exchanges, and Water Made Available by Extraordinary Conservation, Calendar Year 2015. (Values are in acre-feet.)

PROGRAM OR PARTICIPATING AGENCIES	TOTAL
IID Conservation	
1988 IID/MWD Conservation Agreement <sup>1</sup>	107,820
MWD Reduction for CVWD use <sup>2</sup>	6,715
Transfer to SDCWA <sup>3</sup>	100,000
SDCWA Mitigation Transfer <sup>4</sup>	153,327
IID Intra-Priority 3 Transfer to CVWD <sup>5</sup>	36,000
Extraordinary Conservation Delivered to MWD <sup>6</sup>	38,313
MWD/PVID Forbearance and Fallowing Program <sup>7</sup>	94,477
All-American Canal Lining Project <sup>8</sup>	
SDCWA Exchange with MWD	56,200
Supplemental to MWD	11,500
Total Conservation	67,700
Coachella Canal Lining Project <sup>9</sup>	
SDCWA Exchange With MWD	23,147
Supplemental to MWD	4,500
Mitigation	3,203
Total Conservation	30,850
Total MWD Exchange with SDCWA 10	179,347

Note: Additional transfers and water exchange obligations may be found in Table 22, Exhibit B to the CRWDA.

#### Footnotes:

<sup>1</sup> 1988 IID/MWD Water Conservation Program conserved water, determined in accordance with the amended 1988 Program Agreement and the amended 1989 Approval Agreement, made available by IID for diversion in the reporting year by MWD, reported as an annual total. In 2015, the amount of conserved water available under the program was 107,820 AF as documented in the December 17, 2014, letter agreement between MWD and IID.

<sup>&</sup>lt;sup>2</sup> In accordance with the amended 1989 Approval Agreement, CVWD may request up to 20,000 AF of the water conserved by IID for MWD under the 1988 IID/MWD Water Conservation Agreement. MWD reduces its use by up to 20,000 AF of water conserved for use by CVWD, which is reflected in the displayed value above.

<sup>&</sup>lt;sup>3</sup> As referenced in Column 5, Exhibit B, of the CRWDA, IID conserves water for transfer to SDCWA.

<sup>&</sup>lt;sup>4</sup> As referenced in Column 7, Exhibit B, of the CRWDA and the IID/SDCWA Water Transfer Agreement, as amended, IID conserves water for transfer to SDCWA for delivery, by exchange from non-Colorado River sources, to the Salton Sea for mitigation purposes. As reported above, in 2015 IID delivered 153,327 AF of conserved water, created through fallowing, to the Salton Sea for mitigation purposes. Of this amount, 109,434 AF was required to meet the 2015 Salton Sea mitigation requirement shown in Column 7 of Exhibit B, adjusted for a 566 AF over-delivery in 2014 (110,000 - 566 = 109,434 AF). In 2015, IID delivered an additional 43,893 AF of conserved water (153,327 - 109,434 = 43,893 AF), created through fallowing, to the Salton Sea and, by letter dated November 25, 2015, indicated that the additional volume would serve as pre-delivery to meet IID's 2016 Salton Sea mitigation requirement. The appropriate accounting for the final disposition of the additional 43,893 AF delivered to the Salton Sea is under review by Reclamation. Also, as first reported in the 2010 Water Accounting Report (and subsequent years' reports), in 2010 IID delivered 46,546 AF of Colorado River water to the Salton Sea with a stated intention to store the water for use for Salton Sea mitigation requirements in 2011 and half of 2012. IID did not conserve an equivalent amount of water in 2011 and 2012 for delivery to the Salton Sea resulting in a Colorado River system storage depletion of 46,546 AF. This matter is the subject of a series of letters between Reclamation and IID, including Reclamation's letter dated May 3, 2013; IID's letter dated June 28, 2013; and Reclamation's letter dated July 2, 2013, and currently remains under discussion between Reclamation and IID.

<sup>&</sup>lt;sup>5</sup> IID conserves water under an acquisition agreement with CVWD to meet the IID/CVWD Intra-priority 3 Transfer obligation as referenced in Column 8, Exhibit B of the CRWDA.

<sup>&</sup>lt;sup>6</sup> For informational purposes: Water conserved by IID through extraordinary conservation and delivered to MWD pursuant to the California Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus, as amended.

<sup>&</sup>lt;sup>7</sup> PVID's annual reduction in consumptive use of Colorado River water through land fallowing, as reported in Table 8 of the CY 2015 Fallowed Land Verification Report, PVID/MWD Forbearance and Fallowing Program, dated April 28, 2016. This value represents the estimated reduction in PVID's consumptive use as a result of fallowing 12,975 acres from January through July and 25,947 acres from August through December in the reporting year.

<sup>&</sup>lt;sup>8</sup> The Secretarial Determination of water conserved by lining certain reaches of the AAC was issued in December 2009 (see Significant Documents). As a result, conserved water was distributed in accordance with the Allocation Agreement among the United States, MWD, CVWD, IID, SDCWA, and the SLRSP, dated October 10, 2003 and Public Law 100-675, as amended.

<sup>&</sup>lt;sup>9</sup> The Secretarial Determination of water conserved by the CCLP was issued in January 2008. As a result, conserved water was distributed in accordance with the Allocation Agreement among the United States, MWD, CVWD, IID, SDCWA, and the SLRSP, dated October 10, 2003, Public Law 100-675, as amended, and Exhibit B to the Settlement Agreement between CVWD and SDCWA, dated October 30, 2007.

<sup>&</sup>lt;sup>10</sup> The amount shown represents water exchanged between MWD and SDCWA in the reporting year. This is the sum of: IID Conservation - Transfer to SDCWA (100,000 AF), All-American Canal Lining Project - SDCWA Exchange with MWD (56,200 AF), and the Coachella Canal Lining Project - SDCWA Exchange with MWD (23,147 AF).

## Table 20. State of Nevada - Transfers, Exchanges, and Water Made Available by Extraordinary Conservation, Calendar Year 2015. (Values are in acre-feet.)

PROGRAM OR PARTICIPATING AGENCIES	TOTAL
Pilot System Conservation Program - SNWA <sup>1</sup>	7,500

<sup>&</sup>lt;sup>1</sup> In 2015, the Bureau of Reclamation and SNWA entered into a System Conservation Implementation Agreement (SCIA) under the Pilot System Conservation Program in which SNWA agreed to conserve 7,500 AF from its Muddy and Virgin River Tributary Conservation projects to create System Conservation Water. In accordance with the SCIA, this water remained in Lake Mead to benefit system storage. (Volume noted is provisional until verified by Reclamation.)

Table 21. Bureau of Reclamation - Water Made Available by Conservation, Calendar Year 2015. (Values are in acre-feet.)

CONSERVATION PROGRAM	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	TOTAL
ARIZONA GROUND WATER PERMIT <sup>1</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0
WARREN H. BROCK RESERVOIR STORAGE <sup>2</sup>		9,543	14,712	15,299	16,866	6,070	12,994	11,748	9,416	12,474	11,447	32,551	167,806
YUMA DESALTING PLANT DISCHARGE TO THE COLORADO RIVER <sup>3</sup>		0	0	4	2	1	0	0	0	35	12	0	54
													ŀ

<sup>&</sup>lt;sup>1</sup> In 2007, Reclamation was granted a permit to withdraw Arizona groundwater for return flow credits to offset bypass flows to Mexico. The values shown represent the return flow credits earned in accordance with the permit in the year covered by this report.

<sup>&</sup>lt;sup>2</sup> Colorado River water stored in Warren H. Brock Reservoir. This total does not necessarily represent all new conservation or system efficiency gains by the reservoir. The difference between the value shown here and the amount shown in the California Article V(B) section, IID tabulation, "Delivery From Warren H. Brock Reservoir", consists of changes in reservoir storage and losses from the reservoir.

<sup>&</sup>lt;sup>3</sup> Water created by operation of the Yuma Desalting Plant and discharged to the Colorado River.

Table 22. Exhibit B to the Colorado River Water Delivery Agreement.

#### **EXHIBIT B** QUANTIFICATION AND TRANSFERS In Thousands of Acre-feet Column: 21 22 23 12 CVWD Priority 3a IID Priority 3a Reductions Reductions Additions Total Priority CVWD Net 1-3 Use Plus IID 10 IID Net 1CVWD 4IID 6IID Reductions Consumptive eduction Consumptive 5,6IID 8IID 4CVWD Use Amount Consumptive eduction Reduction Total Use Amount : Total 7Intra-9IID IID Priority IID AC Linin Reduction Amount (difference CVWD eduction 9CVWD Amount (columns 14 Use (sum o Reduction SDCWA Priority 3 eduction (sum of . between CC Lining Reduction (sum of Intra-Priority Intra-Priorit 17 plus columns Priority 3a SDCWA 3 Transfer Calendar Priority 1 Quantified DCWA Mitigation Transfer Salton Sea ISG Misc. columns 4 column 3 an Quantified SDCWA Misc. columns 3 Transfer columns 18 + 2+13+20 12 Annual Year 2 and 3b Amount -Transfei Transfer SLR Transfer ID/CVWD Restoratio Backfill hrough 11) column 12) Amount SLR **PPRs** 15 + 16IID/CVWD MD/CVW 19) plus 11+16) enchmarks Targets 2003 420 3.100 10 11.5 136.5 2.963.5 330 347 3.745.0 3.740 3.740 2004 420 3 100 110 20 10 0 Ω 11.5 151.5 2 948 5 330 0 20 347 3 730 0 3 707 2005 420 3 100 110 30 15 Ω 0 11.5 166.5 2 933 5 330 Ω 20 347 3 715 0 3 674 2006 420 110 40 20 190.5 330 20 321 3,665.0 3.640 3 100 29 11.5 2 909 5 3 640 2007 420 3.100 50 11 5 196.5 2,903.5 330 26 29 20 321 3,659.0 3,603 420 420 288.2 330 330 325 329 3,571.3 2008 3,100 50 25 30 4 11.5 2,811.8 29 4 3,566 3.100 3.530 2009 60 67.7 8 11.5 29 40 2.772.8 8 20 3.530 2010 420 3 100 110 70 67.7 35 12 60 11.5 366.2 2 733 8 330 26 29 12 20 333 3 501 3 3.510 2011 420 3 100 110 80 67.7 40 16 80 11.5 405.2 2 694 8 330 26 29 16 20 337 3 466 3 3 490 10 2012 420 3 100 110 90 67.7 45 21 100 11.5 445.2 2 654 8 330 26 29 21 20 342 3 431 3 3 470 110 3,396.3 3,376.3 11 2013 420 3,100 100 67.7 70 26 31 100 11 5 485.2 2,614.8 330 26 29 26 20 347 3.462 12 2014 420 420 3.100 100 90 100 11.5 510.2 2.589.8 330 29 352 3.455 100 3.100 67.7 110 110 100 36 11.5 2.564.8 330 36 20 3.356.3 3.448 29 2016 420 3.100 100 67.7 130 41 100 11.5 560.2 2.539.8 330 26 29 41 20 362 3.336.3 3.440 15 2017 420 3 100 110 100 67.7 150 45 91 11.5 575.2 2.524.8 330 26 29 45 20 366 3 325 3 16 2018 420 3 100 110 130 67.7 0 63 11.5 382.2 2 717 8 330 26 29 63 20 384 3 536 3 2019 420 3 100 160 68 11.5 417.2 2 682 8 29 68 389 3 506 3 0 73 330 73 394 18 2020 420 3,100 193 67.7 11 5 454.7 2,645.3 26 26 29 3,473.8 3.100 420 205 67.7 11.5 78 19 472.2 2.627.8 29 399 3.461.3 20 420 3.100 203 67.7 83 0 11.5 474.7 2.625.3 330 26 29 83 20 404 3.463.8 0 21 2023 420 3 100 110 200 67.7 Ω 88 Ω 11.5 477.2 2 622 8 330 26 29 88 20 409 3 466 3 22 2024 420 3 100 110 200 67.7 0 93 11.5 482 2 2 617 8 330 26 26 29 93 20 414 3 466 3 2025 420 98 487.2 330 29 3 100 200 419 23 11.5 26128 98 3 466 3 103 330 24 2026 420 3,100 110 200 67.7 0 11 5 492.2 2,607.8 26 29 103 20 424 3,466.3

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#### Notes

Substitute transfers can be made provided the total volume of water to be transferred remains equal or greater than amounts shown consistent with applicable federal approvals. The shaded columns represent amounts of water that may vary.

<sup>1</sup> Exhibit B is independent of increases and reductions as allowed under the Inadvertent Overrun and Payback Policy.

<sup>2</sup> Any higher use covered by MWD, any lesser use will produce water for MWD and help satisfy ISG Benchmarks and Annual Targets.

<sup>3</sup> IID/MWD 1988 Conservation Program conserves up to 110,000 AFY and the amount is based upon periodic verification. Of amount conserved, up to 20,000 AFY to CVWD (column 19), which does not count toward ISG Benchmarks and Annual Targets, and remainder to MWD.

<sup>4</sup> Ramp-up amounts may vary based upon construction progress, and final amounts will be determined by the Secretary pursuant to the Allocation Agreement.

<sup>5</sup> Any amount identified in Exhibit B for mitigation purposes will only be from non-Colorado River sources and these amounts may be provided by exchange for Colorado River water.

Water would be transferred to MWD subject to satisfaction of certain conditions and to appropriate federal approvals. For informational purposes only, these transfers may also be subject to state approvals. Schedules are subject to adjustments with mutual consent. After 2006, these quantities will count toward the ISG Benchmarks (column 22) and Annual Targets (column 23) only if and to the extent that water is transferred into the Colorado River Aqueduct for use by MWD and/or SDCWA.

<sup>7</sup> MWD can acquire if CVWD declines the water. Any water obtained by MWD will be counted as additional agricultural reduction to help satisfy the ISG Benchmarks and Annual Targets. MWD will provide CVWD 50,000 AFY of the 100,000 AFY starting in year 46.

<sup>8</sup> IID has agreed to provide transfer amounts to meet the minimum ISG benchmarks, not to exceed a cumulative total of 145,000 AF. Maximum transfer amounts are 25,000 AF in 2006, 50,000 AF plus the unused amount from 2006 in 2009, and 70,000 AF plus the unused amounts from 2006 and 2009 in 2012. In addition to the maximum transfer amounts IID has also committed that no more than 72,500 AF of reduced inflow to the Salton Sea would result from these additional transfers.

<sup>9</sup> Up to the amount shown, as agreed upon reduction to IID or CVWD to cover collectively the sum of individual Miscellaneous PPRs, federal reserved rights and decreed rights. This is a reduction that counts towards ISG Benchmarks and Annual Targets.

<sup>10</sup> For purposes of Subparagraph 8(b)(2)(i) and (ii) and 8(c)(1) and (4) the Secretary will take into account: (i) the satisfaction of necessary conditions to certain transfers (columns 7 and 9) not within IID's control: (ii) the amounts of conserved water as determined, where such amounts may vary (columns 4, 6, 9 and 10); and (iii) with respect to column 7, reductions by IID will be considered in determining IID's compliance regardless of whether the conserved water is diverted into the Colorado River Aqueduct.

<sup>11</sup> For purposes of Subparagraph 8(c)(1) and (4) the Secretary will take into account: (i) the satisfaction of necessary conditions to certain transfers (columns 15 and 16) not within CVWD's control;

and (ii) the amounts of conserved water as determined, where such amounts may vary (column 15).

<sup>12</sup> All-consumptive use of priorities 1 through 3 plus 14,500 AF of PPRs must be within 25,000 AF of the amount stated.

<sup>13</sup> Assumes SDCWA does not elect termination in year 35.

<sup>14</sup> Assumes SDCWA and IID mutually consent to renewal term of 30 years.

### INTENTIONALLY CREATED SURPLUS

In 2006, Reclamation entered into letter agreements with the Imperial Irrigation District and the Metropolitan Water District of Southern California to implement a demonstration program for the development of Intentionally Created Surplus (ICS). In this program, ICS refers to a quantity of surplus water the Secretary may make available for release under Article II(B)(2) of the Consolidated Decree. The demonstration program covered calendars years 2006 – 2007 and required that ICS be created through extraordinary conservation measures.

On December 13, 2007, the Secretary of the Interior signed the *Record of Decision, Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead* (2007 Interim Guidelines). Beginning in 2008, the creation of ICS is governed by the 2007 Interim Guidelines. Section 3, pages 38-43 of the 2007 Interim Guidelines contains the policies and guidelines concerning the categories of, creation, delivery, and accounting for Intentionally Created Surplus.

Under the 2007 Interim Guidelines, ICS may be created by an approved water user using a variety of approved measures within the four established ICS categories: Extraordinary Conservation ICS, Tributary Conservation ICS, System Efficiency ICS, and Imported ICS. Also stipulated in the 2007 Interim Guidelines are the limitations as to the maximum quantities of ICS that may be created during each year, delivered in a year, and accumulated in a water user's ICS account.

The following conditions apply to ICS:

- 1) During the year of creation, and with the exception of System Efficiency ICS, there is a one-time deduction of 5 percent from the amount of ICS created which is dedicated to system storage to provide a collective storage benefit for Colorado River users.
- 2) Beginning in the year after its creation, and with the exception of System Efficiency ICS, an annual evaporation loss of 3 percent is applied to the quantity of ICS remaining in an ICS account at the end of each year. This assessment is not applied during a shortage year.
- 3) If the Secretary release Flood Control Surplus water, Extraordinary Conservation ICS accumulated in ICS accounts is reduced by the amount of the Flood Control Surplus on an acre-foot for acre-foot basis until no Extraordinary Conservation ICS remains.
- 4) If a water user has an overrun payback obligation, the water user must repay the obligation in full before it can request or receive delivery of ICS.

The Secretary is responsible for approving plans for the creation of ICS, allowing for their modification, and developing procedures to account for and verify ICS creation and delivery.

Table 23 documents information associated with ICS, as applicable, for each individual water user, including.

- 1) The beginning of year ICS account balance.
- 2) The amount of ICS created in the reporting year.
- 3) The amount of ICS delivered in the reporting year.
- 4) The end of year ICS account balance, after applying reductions for system assessment, IOPP payback, and evaporation, as appropriate.

Table 23. Intentionally Created Surplus by State, User, and ICS Type, Calendar Year 2015. (Values are in acre-feet.)

			воу		System	IOPP		Evaporation	EOY
State	Water User	ICS Type	Balance	Creation <sup>1</sup>	Assessment <sup>2</sup>	Payback <sup>3</sup>	Delivery	Loss 4	Balance 5
Arizona									
	CAWCD	System Efficiency - Warren H. Brock	100,000	0	N/A	0	0	N/A	100,000
	CAWCD	System Efficiency - YDP Pilot Run	3,050	0	N/A	0	0	N/A	3,050
							To	otal Arizona:	103,050
California									
	MWD	Extraordinary Conservation	61,764	0	0	0	61,764	0	(
	MWD	System Efficiency - Warren H. Brock	65,000	0	N/A	0	8,992	N/A	56,008
	MWD	System Efficiency - YDP Pilot Run	24,397	0	N/A	0	0	N/A	24,397
	IID	Extraordinary Conservation	17,924	0	0	0	0	538	17,386
							Tota	l California:	97,79
Nevada									
	SNWA	Extraordinary Conservation converted from							
		Tributary Conservation / Imported <sup>6</sup>	161,683	0	0	0	75,000	2,600	84,08
	SNWA	Tributary Conservation 7	N/A	25,147	1,257	0	0	N/A	23,89
	SNWA	Imported - Coyote Spring Valley	N/A	0	0	0	0	N/A	
	SNWA	System Efficiency - Warren H. Brock	400,000	0	N/A	0	0	N/A	400,00
	SNWA	System Efficiency - YDP Pilot Run	3,050	0	N/A	0	0	N/A	3,05
							Т	otal Nevada:	511,02
						Total ICS st	tored in Lake Mea	d: EOY 2015	711,86

<sup>&</sup>lt;sup>1</sup> The amount of ICS created by the water user during the reporting year. Unless otherwise noted, all current year values displayed in this column are provisional until verified by Reclamation.

<sup>&</sup>lt;sup>2</sup> In accordance with Section 3.B.2. of the 2007 Interim Guidelines, there shall be a one-time deduction of 5 percent from the amount of ICS in the year of creation. This system assessment shall result in additional system water in storage in Lake Mead.

<sup>&</sup>lt;sup>3</sup> In accordance with Section 3.C.7 of the 2007 Interim Guidelines, if a contractor has an overrun payback obligation, the contractor must repay the overrun payback obligation in full before requesting or receiving delivery of ICS. If a contractor requests to use its ICS credits to pay back an overrun, the contractor's ICS account(s) shall be reduced by the amount of the payback prior to calculating the evaporation loss and the remaining ICS credits available to the contractor.

<sup>&</sup>lt;sup>4</sup> In accordance with Section 3.B.7 of the 2007 Interim Guidelines, a 3 percent evaporation loss shall be applied annually to the EOY balance of Extraordinary Conservation ICS beginning in the year after the ICS is created and continuing until no Extraordinary Conservation ICS remains in Lake Mead.

<sup>&</sup>lt;sup>5</sup> The EOY balance of ICS including creation, reductions, and delivery taking place in the reporting year.

<sup>&</sup>lt;sup>6</sup> The verified amount of Tributary Conservation ICS created by SNWA in 2014 is 29,266 AF. After applying the 5 percent reduction for system assessment, the revised 2014 EOY Tributary Conservation ICS balance is 27,803 AF. In accordance with Section 3.A.2 of the Interim Guidelines, this amount was converted to Extraordinary Conservation ICS at the beginning of 2015.

<sup>&</sup>lt;sup>7</sup> In 2015, SNWA conserved 32,647 AF of water from its Muddy and Virgin River Tributary Conservation projects. Of this amount, 7,500 AF was conveyed to Lake Mead as System Conservation Water in satisfaction of SNWA's commitment under the Pilot System Conservation Program. The balance of 25,147 AF was conveyed to Lake Mead as Tributary Conservation ICS. (Volumes noted are provisional until verified by Reclamation.)

The table below includes agreements, letters, regulations and operating plans that impacted Reclamation's delivery of Colorado River water during calendar year 2015. In prior years through 2011, electronic copies of these documents were included on a CD enclosed with the report. Beginning with the 2012 report, these documents may be retrieved by clicking on the item in the electronic version of the report which are available at Reclamation's website at: www.usbr.gov/lc/region/g4000/wtracct.html. These documents are best accessed using Microsoft's Internet Explorer. Acronyms used below are defined on the page of this report entitled, "Acronyms and Abbreviated Terms."

	RECORD OF DECISIONS	
1.	The Record of Decision for Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead dated December 13, 2007. This document provides the framework used by the Secretary of the Interior for shortage, coordinated operation of Lake Powell and Lake Mead, and to encourage conservation, plan for shortages, implement closer coordination of operations of Lake Powell and Lake Mead, and preserve flexibility to deal with further challenges.	
2.	The Record of Decision for the Colorado River Water Delivery Agreement: Implementation Agreement, Inadvertent Overrun and Payback Policy, and Related Federal Actions Final Environmental Impact Statement. The Water Delivery Agreement provides certainty regarding water entitlements that are necessary for continued effective implementation of the Secretary's responsibilities as Water Master on the lower Colorado River.	



	INTERIM DETERMINATIONS	
4.	The Secretary's Interim Determination for the amount of water conserved and the amount of water made available for allocation as a result of the Coachella Canal Lining Project, dated January 31, 2008.	
5.	The Secretary's Interim Determination for the amount of water conserved and the amount of water made available for allocation as a result of the All-American Canal Lining Project, dated December 4, 2009.	

	PILOT SYSTEM CONSERVATION PROGRAM	
6.	System Conservation Implementation Agreement No. 15-XX-30-W0583, Between Reclamation and the Tohono O'Odham Nation to Implement a Pilot System Conservation Program.	
7.	System Conservation Implementation Agreement No. 15-XX-30-W0576, Between Reclamation and SNWA to Implement a Pilot System Conservation Program.	

	INTENTIONALLY CREATED SURPLUS	
8.	Documents related to the creation, delivery and accounting of IID's ICS, calendar year 2015.	
9.	Documents related to the creation, delivery and accounting of MWD's ICS, calendar year 2015.	
10.	Documents related to the creation, delivery and accounting of SNWA's ICS, calendar year 2015.	

	INTERSTATE WATER BANKING	
11.	43 CFR Part 414: Offstream Storage of Colorado River Water: Development and Release of Intentionally Created Unused Apportionment in the Lower Division States; Final Rule.	
12.	Documents related to Colorado River water diverted and stored in Arizona by AWBA for the benefit of SNWA.	
13.	Documents related to Colorado River water diverted and stored in California by MWD for the benefit of SNWA.	

	INADVERTENT OVERRUN AND PAYBACK POLICY	
14.	Inadvertent Overrun and Payback Policy, October 10, 2003.	
15.	Documents related to Beattie Farms Southwest's inadvertent overrun and payback for overruns incurred in calendar years 2011 and 2012.	
16.	Documents related to the Cocopah Indian Tribe's inadvertent overrun and payback for an overrun incurred in calendar year 2011.	

	COLORADO RIVER WATER DELIVERY AGREEMENT	
17.	Reclamation's letter to IID dated May 3, 2013, discussing transfer and payback issues due to the direct delivery of Colorado River water to the Salton Sea in 2010.	
18.	IID's letter to Reclamation dated June 28, 2013, discussing its set of actions due to the direct delivery of Colorado River water to the Salton Sea in 2010.	
19.	Reclamation's letter to IID dated July 2, 2013, discussing the transfer and payback issues due to the direct delivery of Colorado River water to the Salton Sea in 2010.	
20.	IID/MWD Letter Agreement dated December 17, 2014, confirming the total Calendar Year 2015 conservation yield under the 1988 IID/MWD Conservation Agreement, as amended.	
21.	IID's letter to Reclamation dated November 25, 2015, notifying Reclamation of its pre-delivery of excess fallowing conservation to the Salton Sea to meet a portion of its 2016 Salton Sea mitigation obligation.	
22.	CVWD's letter to Reclamation dated April 25 2016, providing a final accounting for the amount of environmental mitigation water used in Calendar Year 2015 for the Coachella Canal Lining Project and the remaining water available for transfer to the SDCWA.	

	WATER ACCOUNTING	
23.	A description on how irrigation water is calculated by the USGS for areas where estimates of diversion are required.	
24.	Maps showing the locations of the wells and river pumps reported by the USGS, and presented in the supplemental tabulations for Arizona and California.	
25.	Map showing the locations of the Ranches within the Fort Yuma Indian Reservation, CA.	
26.	Central Arizona Groundwater Replenishment District's letter to Reclamation dated January 19, 2016, quantifying the amount of conserved water from its Pilot Fallowing Program with the Yuma Mesa Irrigation and Drainage District for Calendar Year 2015.	
27.	CAWCD's letter to Reclamation dated March 2, 2015, regarding its revised estimate of Colorado River water diversion for calendar year 2015, in which CAWCD notified Reclamation that it anticipated creating up to 96,000 AF of ICS in 2015.	

	WATER ACCOUNTING	
28.	IID's letter to MWD dated April 28, 2016, requesting to store 38,313 AF of IID's 2015 excess extraordinary conservation water in MWD's system.	
29.	MWD'S letter to IID, notifying IID of its ability to take delivery of 38,313 AF of IID's 2015 excess extraordinary conservation water.	
30.	2007 California Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus (California ICS Agreement).	
31.	2015 Amendment No. 1 to the 2007 California ICS Agreement.	
32.	Procedure for Determining Return Flow Credits to Nevada from Las Vegas Wash, adopted by the Task Force on Unmeasured Return Flows on August 28, 1984.	
33.	Reclamation letter to SNWA and CRCN dated December 5, 2007 regarding Las Vegas Valley Return Flow Credit Methodology.	

	UNITED STATES-MEXICO 1944 WATER TREATY	
34.	Minute No. 242 – Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River.	
35.	Minute No. 318 – Adjustment of Delivery Schedules for Water Allotted to Mexico for the Years 2010 Through 2013 as a Result of Infrastructure Damage in Irrigation District 014, Rio Colorado, Caused by the April 2010 Earthquake in the Mexicali Valley, Baja California.	
36.	Minute No. 319 – Interim International Cooperative Measures in the Colorado River Basin Through 2017 and Extension of Minute 318 Cooperative Measures to Address the Continued Effects of the April 2010 Earthquake in the Mexicali Valley, Baja California.	
37.	2001 Memorandum of Understanding between Reclamation and the U.S. Section of the IBWC regarding deliveries at SIB.	
38.	USIBWC's letter to Reclamation dated April 6, 2016, advising Reclamation on the accounting of volumes of Colorado River water deferred in Calendar Years 2011 through 2015 in accordance with the provisions of Minutes No. 318 and 319.	